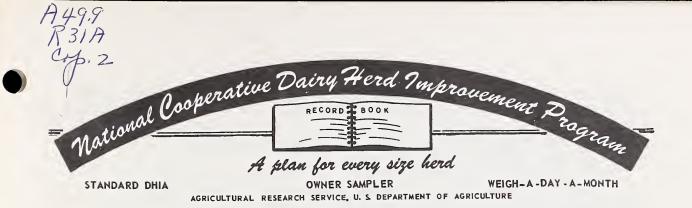
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.





Dairy-Herd-Improvement Letter

ARS-44-188 (Vol. 43, No. 1)

February 1967

DHIA AGE ADJUSTMENT FACTORS FOR STANDARDIZING LACTATIONS
TO A MATURE BASIS

by B. T. McDaniel, R. H. Miller, E. L. Corley, and R. D. Plowman

The new age adjustment factors shown on the following pages were derived by USDA to adjust DHIA lactation records to a mature equivalent basis. These new age adjustment factors are more accurate than those presently in use because they take account of the effects of region, season, milk, and fat as well as those due to breeds. Their use became effective February 1, 1967, to standardize records for age at calving in USDA sire and cow evaluations.

The purpose of these adjustment factors is to remove the variation arising from age differences among cows that calved in the same herds in the same year and season (herdmates).

These factors may not adequately adjust for age differences among records in progress, especially those for cows with less than 120 days in milk (9). 1/

These new age adjustment factors were based on a total of 1,795,895 DHIA lactations initiated between January 1, 1950 and May 1, 1964. Records were used only from cows sired by

1/ Underlined numerals in parentheses refer to Literature Cited on pages 3 and 4.

U. S. DEFT. OF AGRICULTURE NATIONAL AGRICULTURAL LIBRARY

Issued March 1967

JUN 20 1967

registered bulls and out of dams with valid DHIA identification, and where both parents were of the same breed. Records of 90 days or more in length were extended to a 305-day basis by DHIA projection factors $(\underline{5})$ and included in the development of the age factors.

To establish age at maturity and mature yield, all consecutive 2-year moving averages between 5 and 10 years of age were computed. The 2-year period with the highest average yield was chosen as the age of mature yield. Adjustment factors were computed by use of the gross comparison method (7) in which the ratio between mature yield and production of the other ages was determined. The new factors were developed from these ratios after smoothing by use of a 5-month moving average as described by Miller (7).

Research has shown that age adjustment factors vary substantially between breeds, between seasons of calving, between geographical areas of the United States, and between milk and fat yield (1-4, 6-8, 10, 11). These variations are large enough to justify independent sets of factors. Separate sets of factors were developed for Ayrshire, Guernsey, Jersey, Holstein, Brown Swiss, and Milking Shorthorn cows. Factors for Mixed Breeds were obtained by averaging factors for all the breeds.

Because of the small number of records available, the factors for Red Dane cows were erratic but resembled those for Brown Swiss. Red Poll factors were also erratic but resembled those for Milking Shorthorn. For this reason it was deemed advisable to use the Brown Swiss factors for Red Dane cows and the Milking Shorthorn factors for Red Poll.

Factors were derived independently for cows calving in the period from November 1 through June 30 (Season I) and from July through October 31 (Season II). Separate factors for milk and fat yields were also computed in each season.

Different sets of factors were also developed for the various geographical areas in the United States. Initially, approximate factors were computed for a large number of regions consisting of individual or a small group of States. Analyses were conducted (6) and regions were consolidated as much as possible, consistent with removing the majority of the regional variation. The final stratification of the new factors also considered the number of records that were available from a breed in an area. Efforts were made to reduce sets of factors in situations where a very small number

of cows were available. The States used in the final regional stratification for each breed are shown in table 1.

Percentage distribution of cows by age group, breed, region, and season is shown in table 2. The numbers of DHIA lactations used in developing sets of factors for each breed, region, and season are shown in table 3. The age at which mature (maximum) production was reached and the average yields in the 2-year period of maturity are shown in table 4 for each breed, region, season, and for yields of milk and fat.

Trends in milk and fat production with increasing age for Ayrshire, Guernsey, Holstein, Jersey, and Brown Swiss cows are illustrated by season in figures 1 and 2. The averages presented include all data used for these breeds from all areas of the United States. Variation in age adjustment factors for the two seasons reflects the differences between winter and summer calvings in the slopes of the age-yield curves.

The variation that exists between age adjustment factors for regions, seasons, and yields of milk and fat is illustrated by the graphic presentation of sets of factors in figures 3, 4, and 5. An example of differences between adjustment factors for milk and fat production is shown in figure 3. Regional differences are illustrated in figure 5 and seasonal diversity in figure 4.

The age adjustment factors are presented in tables 5 through 26. Factors for the two seasons, and for milk and fat yields for a breed-region class are shown in the individual tables.

Literature Cited

- (1) Blanchard, R. P., Freeman, A. E., and Spike, P. W. 1966. variation in lactation yield of milk constituents. Jour. Dairy Sci., 49: 953.
- (2) Gravir, K., and Hickman, C. G.
 1966. importance of lactation number, age, and season of calving for dairy cattle breed improvement (based on canadian record of performance).
 Pub. No. 1239, Canada Dept. Agr.

- (3) Henderson, C. R.
 1965. unpublished research on New York DHIA records.
 (Private communication).
- (4) Herd Improvement Council.
 1966. sire survey register. New Zealand Dairy Production and Marketing Board. May.
- (5) McDaniel, B. T., Miller, R. H., and Corley, E. L.
 1965. DHIA factors for projecting incomplete records
 to 305 days. Dairy Herd Improvement Letter.
 U.S. Dept. Agr. ARS-44-164.
- (6) and Corley, E. L.

 1966. environmental influences on age correction factors. (Abstract) Jour. Dairy Sci., 49: 736.
- (7) Miller, R. H.
 1964. biases in the estimation of the regression of
 milk production on age. Jour. Dairy Sci.,
 47: 855.
- (8) Harvey, W. R., Tabler, K. A., and others.
 1966. maximum likelihood estimates of age effects.
 Jour. Dairy Sci., 49: 65.
- (9) McDaniel, B. T., and Corley, E. L.

 1967. variation in ratio factors for age adjusting part lactation records. Jour. Dairy Sci.,
 50: (in press)
- (10) Simpson, A. A., Burnside, E. B., and Rennie, J. C. 1966. correction of milk records for age effects. Paper presented at annual meeting, Eastern Section, Canadian Sci. Animal Prod. (mimeo)
- (11) Syrstad, Ola.
 1965. studies on dairy herd records. II. effect
 of age and season of calving. Acta Agric.
 Scand. 15: 1.

TABLE 1.--Grouping of States used for regional age correction factors $\frac{1}{2}$

Region number	States
	GUERNSEY AND JERSEY
I	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania
II	Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas
III	Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas
IV	Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii
	HOLSTEIN
I	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New York
II	New Jersey and Pennsylvania
III	Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas
IV	Delaware, Maryland, Virginia, Kentucky, Tennessee, North Carolina, West Virginia, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Arkansas
v	Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, Alaska, and Hawaii
VI	California
	AYRSHIRE AND BROWN SWISS
I	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii
II	Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas
III	Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas

^{1/} Nationwide sets of age correction factors were used for the Milking Shorthorn, Red Dane, Red Poll, and Mixed breeds because of the limited number of observations available.

TABLE 2.--Percentage distribution of cows by age group, breed, region, and season

	Age groupmonths											
Region and season	< 24	24-29	30-35	36-41	42-47	48-59	60-71	72-83	84-95	96-107	108-119	> 119
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct. SHIRE	Pct.	Pct.	Pct.	Pct.	Pct.
egion 1:1/(N.E.and West) November-June	.64	10.58	8.07	10.46	8.31	16.46	13.21	10.27	7.72	5.46	3.66	5.10
July-October egion 2: (Midwest) November-June	.78	10.61	17.12 9.23	11.23	12.58 8.03	16.31	10.86	7.17 8.97	4.84 5.96	3.30	2.10	3.1
July-October Legion 3: (South)	1.54	11.39	17.87 9.74	11.18	12.53 8.61	16.21	10.93	6.74 9.71	4.53 6.75	2.78 5.12	1.87 3.59	5.1
November-June July-October	1.42	10.06	15.83	11.23	11.83	16.38	11.18 RNSEY	7.81	5.32	3.44	2.09	3.4
egion 1:1/(Northeast) November-June	.91	13.50	7.16	11.50	7.75	15.93	12.84	9.90	7.48	5.12	3.41	4.5
July-October egion 2: (Midwest) November-June	1.26	14.24	7.21	11.12	7.44	15.26	10.91	7.92 9.04	5.32 6.35	3.74 4.19	2.51	3.4
July-October Legion 3: (South)	2.18	16.58	13.27	11.98	10.30	15.54	10.20	7.17	5.06 7.39	3.13 5.04	1.96 3.46	2.6
November-June July-October Region 4: (West)	.91 1.26	11.60	15.17	10.21	11.43	15.53	11.05	7.94	5.66	3.92	2.46	3.8
November-June July-October	1.45	15.12 16.67	8.07	11.81	8.07 9.43	16.00	12.15 10.93	9.08 7.72	6.67 5.22	4.41 3.51	2.92	3.5
egion $1:\frac{1}{2}$ (Northeast)							STEIN					
November-June July-October Region 2:(Middle Atlantic)	1.23	15.34 13.83	6.90 16.23	12.85 11.25	7.32 11.89	16.53 15.52	12.84 10.59	9.48 7.08	6.76 4.58	4.50 2.98	2.88 1.88	3.3 2.3
November-June July-October Region 3: (Midwest)	1.88 2.81	15.43 15.68	6.21 13.18	13.21 11.75	6.61 10.01	16.36 15.08	12.65 10.53	9.59 7.51	6.93 5.10	4.67 3.63	2.91 2.23	3.5
November-June July-October	1.55 2.42	17.33 14.81	7.67 14.51	13.37 11.45	7.49 11.09	16.39 15.58	12.25 10.66	8.86 7.21	6.02 4.91	3.89 3.13	2.42 1.97	2.7
Region 4: (South) November-June July-October	1.37 1.79	13.40 11.66	10.48 15.21	11.59 11.82	8.45 11.38	15.80 16.37	12.58 11.24	9.25 7.77	6.63 5.08	4.42 3.18	2.79 2.06	3.2
tegion 5: (West) November-June July-October	1.73 1.91	17.00 15.75	9.43 13.91	12.33 12.17	8.45 10.73	16.03 15.74	11.86 10.62	8.42 7.16	5.84 4.69	3.74 3.03	2.34 1.93	2.8
Region 6: (California) November-June July-October	.72 .72	12.13 12.38	13.96 17.88	10.85 11.20	10.69 11.62	16.22 15.96	11.68 10.76	8.46 6.97	6.09 5.07	3.98 3.35	2.45 2.03	2.7
1/						JE	RSEY					
Region 1: ¹ /(Northeast) November-June July-October	2.54 3.85	15.73 16.67	5.58 11.11	13.50 12.45	5.87 8.65	15.73 14.98	12.68 10.44	9.48 7.60	6.85 5.31	4.89 3.53	3.20 2.53	3.9
Region 2: (Midwest) November-June July-October	3.71 5.40	17.16 17.26	6.82	13.72 12.37	6.54	15.58 14.66	11.82	8.78 7.45	5.89	3.86 3.45	2.66	3.4
Region 3: (South) November-June July-October	3.74 4.33	14.77	7.64 10.36	12.39	6.97	15.71	12.09	9.03	6.43	4.50	2.87	3.8
Region 4: (West) November-June July-October	4.39 5.10	15.18 17.42	6.42 8.72	12.75	9.05	15.34	11.82	9.23	5.64	3.96 4.47	3.01	4.0
Sury decoder		17.42	0,72	12.41	7.44	15.07 BROV	10.94 VN SWIS	8.10 S	5.57	3.73	2.35	3.1
Region $1:\frac{1}{}$ (N.E. and West) November-June		10.61	7.76	9.52	8.02	15.61	12.81	10.27	7.67	5.88	4.23	7.
July-October Region 2: (Midwest) November-June	.92	11.96	12.99	9.74	10.38	14.07 15.52	10.92	8.33 9.60	6.76 7.33	4.71 5.26	3.44 3.60	5.
July-October Region 3: (South) November-June	1.08	11.53	14.08	9.95	10.90	14.87	10.93	8.11	6.16 7.49	4.43 5.16	3.14	4. 5.
November-June July-October	.78	10.43	12.65			16.57	11.60	8.50	6.18	3.98	2.61	4.
egion $1:\frac{1}{}$ (Nationwide)							SHORT					
November-June July-October	2.03	14.32	9.83 14.24	11.77	8.43 10.82	15.34 15.58	11.81	8.69 7.83	6.47 5.44	4.42 3.66	2.82	3.5
egion 1:1/(Nationwide)							DANE					
November-June July-October	2.22	18.23	15.44 21.05	13.92 16.34	10.13 12.47	16.20 14.68	10.38 10.80	6.33 4.16	4.56 1.94	3.29	1.01	
Region $1:\frac{1}{2}$ (Nationwide)						REI	POLL					
November-June July-October	1.25 2.44	7.19 7.32	6.25 6.71	11.25 8.54	7.50 9.15	16.88 15.85	13.13 11.59	12.19 13.42	7.19 9.15	7.19 4.27	5.00 6.10	5.6

 $[\]underline{1}/$ See table 1 for grouping of States into regions for the various breeds.

TABLE 3.--Number of lactations used in developing age adjustment factors by breed, region, and season

		Region 2/							
Breed 1/	Season of calving	I	II	III	IV	v	VI		
Ayrshire	November through June July through October	67,753 48,998	25,958 19,082	14,154 12,447					
Guernsey	November through June July through October	42,969 23,489	57,520 32,450	36,639 24,722	50,522 28,520				
Holstein	November through June July through October	91,883 68,869	78,968 49,064	222,032 153,263	42,638 37,342	82,084 51,688	16,429 9,146		
Jersey	November through June July through October	21,958 13,664	22,601 13,438	42,242 29,619	60,217 31,260				
Brown Swiss	November through June July through October	27,199 16,250	73,199 43,671	6,799 5,129					
M. Shorthorn	November through June July through October	23,779 15,026							
Red Dane	November through June July through October	395 361							
Red Pol1	November through June July through October	320 164							

^{1/} The total number of records available by breed were: Ayrshire, 188,392; Guernsey, 296,831; Holstein, 903,406; Jersey, 234,999; Brown Swiss, 172,247.
2/ See table 1 for the States in each region.

TABLE 4.--Age and yield of milk and fat during 2-year interval of maximum (mature) production by breed, region, and season

			November throug	h June	July through 0	ctober	November throug	h June	July through Oc	ctober
Breed	Region l	/ General area	Age at start of 2-year interval of highest (mature) yield		Age at start o 2-year interva of highest (mature) yield	1 Milk	Age at start of 2-year interval of highest (mature) yield		Age at start of 2-year interval of highest (mature) yield	
			Yr. and mo.	Lb.	Yr. and mo.	Lb.	Yr. and mo.	Lb.	Yr. and mo.	Lb.
Ayrshire	1 2	Northeast and West Midwest	7-3 <u>2</u> / 8-0	10,299 9,943	8-0 8-0	9,841 9,378	7-3 6-6	410 388	7-0 6-9	395 371
	3	South	7-6	9,737	7-0	8,919	7-6	381	7-9	350
Guernsey	1 2 3	Northeaat Midwest South	7-0 7-0 7-0	8,972 8,942	6-0 7-6 6-6	8,450 8,402	6-0 6-3	421 422	6-0 6-6	404 403
	4	West	8-0	8,389 9,505	7-6	7,538 9,030	6-0 6-3	385 451	6-0 6-6	354 438
Holstein	1 2 3 4 5 6	Northeast Middle Atlantic Midwest South West California	6-6 6-9 6-3 8-0 6-9 7-0	13,368 13,016 13,196 12,901 14,092 16,141	6-9 6-3 6-0 6-9 6-9 6-6	13,456 12,624 12,537 11,966 13,446 15,452	6-3 6-3 6-3 6-3 6-6	501 477 473 464 497 571	6-0 6-0 6-0 6-0 6-0 7-0	487 466 453 432 481 552
Jersey	1 2 3 4	Northeast Midwest South West	6-3 6-3 6-0 7-9	8,738 8,249 7,957 8,902	7-3 7-0 6-0 7-9	8,266 7,539 7,185 8,378	6-0 6-0 6-0 7-9	453 424 397 469	6-0 6-9 6-0 6-6	432 393 363 447
Brown Swiss	1 2 3	Northeast and West Midwest South	8-0 7-3 7-3	11,602 11,232 10,992	6-9 7-6 6-6	11,327 10,754 10,133	6-6 6-0 7-0	470 447 436	6-9 6-6 6-6	465 436 404
M. Shorthorn	1	Nationwide	8-0	8,824	8-0	8,058	8-0	330	8-0	304
Red Dane	1	Nationwide	7-6	11,975	6-9	11,326	7-6	490	6-9	444
Red Poll	1	Nationwide	6-3	7,370	8-0	6,695	6-3	300	8-0	281

^{1/} See table 1 for the States in each breed region.
2/ The period of mature production is defined as the 2-year period of highest yield and includes the next 2 years above the age shown.
For instance, the period for highest milk yield of Ayrshires calving from November through June in the Northeast and West was 7 years 3 months to 9 years 2 months. For Ayrshires calving from July through October in same area it was 8-0 to 9-11.

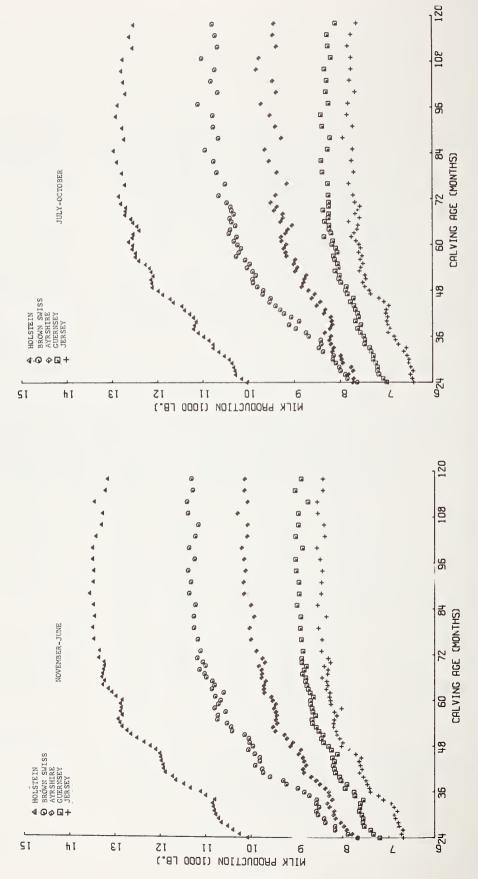
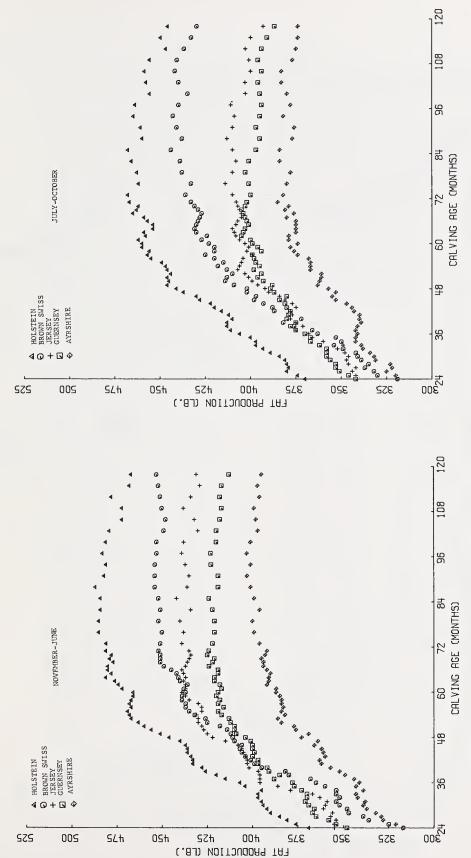


Figure 1. -- Relationship between age and milk yield by breed and season.



2. -- Relationship between age and fat yield by breed and season. Figure

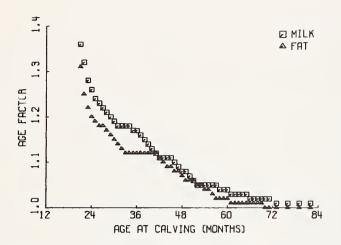


Figure 3.--Age adjustment factors for milk and fat yields of Ayr-shire cows calving in July-October.

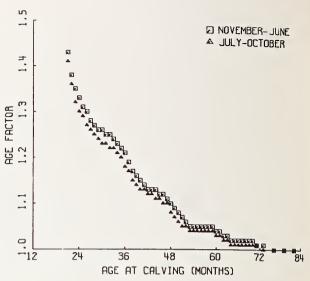


Figure 4.--Age adjustment factors for the milk yields of Holstein cows calving in different seasons.

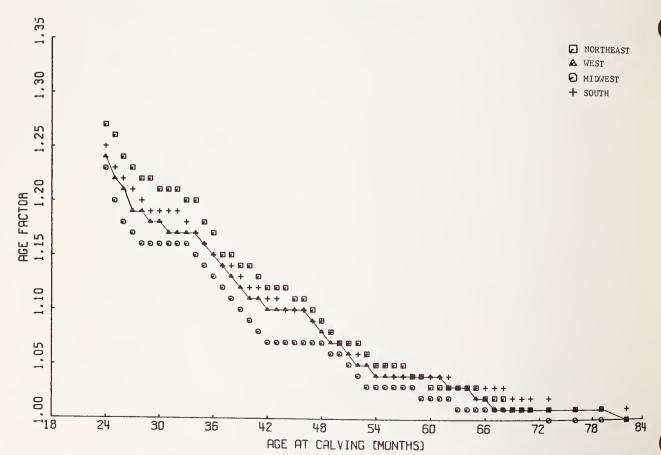


Figure 5.--Age adjustment factors for the milk yields of Guernsey cows calving in different regions of the United States.

TABLE 5.--AYRSHIRE AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii <u>1</u>/

Age in years	Adjustment season of		Age in years	Adjustment season of	
and	November	July to	and	November	July to
months	to June	October	months	to June	October
	Milk Fat	Milk Fat		Milk Fat	Milk Fat
1-9	1.45 1.38	1.35 1.30	5-3	1.04 1.02	1.04 1.02
1-10	1.39 1.31	1.31 1.26	5-4	1.04 1.02	1.04 1.02
1-11	1.35 1.28	1.28 1.24	5-5	1.04 1.02	1.04 1.02
2-0	1.33 1.26	1.27 1.22	5-6	1.04 1.02	1.04 1.02
2-1	1.31 1.25	1.26 1.22	5-7	1.04 1.02	1.03 1.01
2-2	1.30 1.24	1.26 1.21	5-8	1.04 1.02	1.03 1.01
2-3	1.29 1.23	1.25 1.20	5-9	1.04 1.02	1.02 1.00
2-4	1.28 1.22	1.24 1.19	5-10	1.04 1.02	1.02 1.00
2-5	1.27 1.21	1.23 1.18	5-11	1.03 1.01	1.02 1.00
2-6	1.26 1.20	1.22 1.17	6-0 to 6-2	1.02 1.01	1.02 1.00
2-7	1.25 1.20	1.21 1.16	6-3 to 6-5	1.02 1.01	1.02 1.00
2-8	1.24 1.19	1.20 1.15	6-6 to 6-8	1.02 1.01	1.02 1.00
2-9	1.24 1.19	1.19 1.14	6-9 to 6-11	1.02 1.01	1.01 1.00
2-10	1.24 1.19	1.18 1.13	7-0 to 7-2	1.01 1.01	1.01 1.00
2-11	1.24 1.19	1.17 1.13	7-3 to 7-5	1.01 1.00	1.01 1.00
3-0	1.23 1.18	1.17 1.13	7-6 to 7-8	1.00 1.00	1.01 1.00
3-1	1.21 1.17	1.17 1.13	7-9 to 7-11	1.00 1.00	1.01 1.00
3-2	1.20 1.15	1.17 1.13	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.19 1.14	1.17 1.13	8-3 to 8-5	1.00 1.00	1.00 1.00
3-4	1.17 1.13	1.17 1.13	8-6 to 8-8	1.00 1.00	1.00 1.00
3-5	1.16 1.12	1.16 1.13	8-9 to 8-11	1.00 1.00	1.00 1.00
3-6	1.15 1.11	1.15 1.12	9-0 to 9-2	1.00 1.00	1.00 1.00
3-7	1.15 1.11	1.14 1.11	9-3 to 9-5	1.00 1.00	1.00 1.01
3-8	1.15 1.11	1.13 1.10	9-6 to 9-8	1.01 1.01	1.01 1.02
3-9	1.14 1.11	1.13 1.09	9-9 to 9-11	1.01 1.02	1.01 1.02
3-10	1.14 1.10	1.12 1.08	10-0 to 10-2	1.01 1.02	1.01 1.02
3-11	1.13 1.09	1.11 1.08	10-3 to 10-5	1.02 1.03	1.01 1.03
4-0	1.12 1.08	1.10 1.07	10-6 to 10-8	1.02 1.03	1.01 1.03
4-1	1.11 1.08	1.09 1.06	10-9 to 10-11	1.02 1.03	1.01 1.03
4-2	1.10 1.07	1.09 1.06	11-0 to 11-2	1.03 1.04	1.02 1.03
4-3	1.09 1.06	1.09 1.06	11-3 to 11-5	1.03 1.04	1.02 1.03
4-4	1.08 1.05	1.09 1.06	11-6 to 11-8	1.03 1.04	1.02 1.03
4-5	1.08 1.05	1.08 1.05	11-9 to 11-11	1.03 1.05	1.02 1.04
4-6	1.08 1.05	1.07 1.05	12-0 to 12-2	1.03 1.05	1.02 1.04
4-7	1.08 1.05	1.07 1.04	12-3 to 12-5	1.04 1.05	1.02 1.05
4 - 8	1.07 1.05	1.06 1.03	12-6 to 12-8	1.04 1.05	1.03 1.05
4~9	1.07 1.04	1.05 1.02	12-9 to 12-11	1.04 1.06	1.03 1.06
4-10	1.07 1.04	1.04 1.02	13-0 to 13-2	1.04 1.06	1.03 1.06
4-11	1.07 1.04	1.04 1.02	13-3 to 13-5	1.05 1.07	1.04 1.07
5-0	1.06 1.04	1.04 1.02	13-6 to 13-8	1.05 1.07	1.05 1.07
5-1	1.06 1.04	1.04 1.02	13-9 to 13-11	1.06 1.08	1.06 1.08
5-2	1.05 1.03	1.04 1.02	14-0 and up	1.07 1.09	1.08 1.10

^{1/} These factors were based on 67,753 records of cows that calved from November through June and on 48,998 records of those that calved from July through October.

TABLE 6.--AYRSHIRE AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas $\underline{1}/$

Age in years	Adjustment season of		Age in years	Adjustment season of	factors by calving
and months	November to June Milk Fat	July to October Milk Fat	and months	November to June	July to October
1-9	1.35 1.31	1.34 1.29	5-3	1.04 1.03	Milk Fat 1.04 1.02 1.04 1.02 1.04 1.02
1-10	1.33 1.28	1.28 1.23	5-4	1.04 1.03	
1-11	1.30 1.25	1.25 1.19	5-5	1.04 1.03	
2-0	1.28 1.22	1.22 1.17	5 - 6	1.03 1.02	1.04 1.02
2-1	1.26 1.20	1.21 1.15	5 - 7	1.03 1.02	1.04 1.01
2-2	1.25 1.19	1.19 1.14	5 - 8	1.03 1.02	1.03 1.01
2-3	1.24 1.18	1.19 1.14	5-9	1.03 1.02	1.02 1.01
2-4	1.23 1.17	1.19 1.14	5-10	1.03 1.02	1.02 1.01
2-5	1.21 1.16	1.19 1.14	5-11	1.03 1.02	1.02 1.01
2-6	1.20 1.15	1.18 1.13	6-0 to 6-2	1.02 1.01	1.02 1.01
2-7	1.19 1.14	1.18 1.12	6-3 to 6-5	1.02 1.01	1.02 1.01
2-8	1.19 1.14	1.17 1.11	6-6 to 6-8	1.01 1.00	1.01 1.00
2-9	1.19 1.13	1.16 1.11	6-9 to 6-11	1.01 1.00	1.00 1.00
2-10	1.19 1.13	1.16 1.10	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.19 1.13	1.15 1.10	7-3 to 7-5	1.00 1.00	1.00 1.00
3-0	1.19 1.13	1.15 1.10	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.19 1.13	1.15 1.10	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.18 1.13	1.15 1.10	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.17 1.12	1.15 1.10	8-3 to 8-5	1.00 1.01	1.00 1.00
3-4	1.16 1.11	1.15 1.10	8-6 to 8-8	1.00 1.01	1.00 1.00
3-5	1.15 1.11	1.15 1.10	8-9 to 8-11	1.01 1.01	1.00 1.00
3-6	1.14 1.10	1.15 1.10	9-0 to 9-2	1.01 1.01	1.00 1.00
3-7	1.14 1.10	1.15 1.10	9-3 to 9-5	1.01 1.01	1.00 1.01
3-8	1.14 1.10	1.14 1.10	9-6 to 9-8	1.01 1.02	1.01 1.01
3-9	1.14 1.10	1.13 1.09	9-9 to 9-11	1.01 1.02	1.01 1.02
3-10	1.13 1.09	1.12 1.08	10-0 to 10-2	1.01 1.02	1.02 1.02
3-11	1.13 1.09	1.12 1.08	10-3 to 10-5	1.02 1.03	1.02 1.02
4-0	1.12 1.08	1.11 1.07	10-6 to 10-8	1.02 1.03	1.02 1.02
4-1	1.11 1.07	1.10 1.06	10-9 to 10-11	1.02 1.03	1.02 1.02
4-2	1.10 1.06	1.09 1.05	11-0 to 11-2	1.03 1.04	1.02 1.02
4-3	1.09 1.06	1.08 1.05	11-3 to 11-5	1.03 1.04	1.02 1.02
4-4	1.08 1.05	1.08 1.05	11-6 to 11-8	1.03 1.04	1.02 1.02
4-5	1.07 1.04	1.08 1.05	11-9 to 11-11	1.04 1.05	1.02 1.02
4-6	1.07 1.04	1.07 1.04	12-0 to 12-2	1.04 1.05	1.02 1.02
4-7	1.07 1.04	1.06 1.03	12-3 to 12-5	1.05 1.06	1.02 1.02
4-8	1.07 1.04	1.05 1.03	12-6 to 12-8	1.05 1.06	1.02 1.02
4-9	1.07 1.04	1.05 1.02	12-9 to 12-11	1.06 1.07	1.02 1.02
4-10	1.07 1.04	1.05 1.02	13-0 to 13-2	1.06 1.08	1.02 1.02
4-11	1.07 1.04	1.05 1.02	13-3 to 13-5	1.06 1.08	1.02 1.02
5-0	1.06 1.03	1.05 1.02	13-6 to 13-8	1.07 1.09	1.02 1.02
5-1	1.05 1.03	1.04 1.02	13-9 to 13-11	1.07 1.09	1.02 1.02
5-2	1.05 1.03	1.04 1.02	14-0 and up	1.08 1.10	1.04 1.04

^{1/2} These factors were based on 25,958 records of cows that calved from November through June and on 19,082 records of those that calved from July through October.

TABLE 7.--AYRSHIRE AGE ADJUSTMENT FACTORS for milk and fat production:for cows that calve in Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas 1/

Age in years	Adjustment season of		Age in years	Adjustment : season of	
and	November	July to	and	November	July to
months .	to June Milk Fat	October Milk Fat	months	to June Milk Fat	October Milk Fat
1-9	1.41 1.36	1.28 1.23	5-3	1.06 1.03	1.05 1.02
1-10	1.38 1.33	1.24 1.20	5-4	1.06 1.03	1.05 1.02
1-11	1.35 1.30	1.21 1.17	5-5	1.06 1.03	1.05 1.02
2-0	1.32 1.27	1.20 1.16	5-6	1.05 1.03	1.05 1.02
2-1	1.29 1.24	1.20 1.16	5-7	1.05 1.03	1.04 1.02
2-2	1.26 1.21	1.20 1.16	5-8	1.05 1.03	1.03 1.01
2-3	1.25 1.19	1.20 1.15	5-9	1.05 1.03	1.03 1.01
2-4	1.24 1.18	1.19 1.14	5-10	1.05 1.03	1.03 1.01
2-5	1.23 1.18	1.19 1.13	5-11	1.04 1.03	1.02 1.01
2-6	1.23 1.17	1.18 1.13	6-0 to 6-2	1.03 1.02	1.02 1.00
2-7	1.22 1.17	1.17 1.12	6-3 to 6-5	1.03 1.02	1.02 1.00
2-8	1.22 1.16	1.16 1.11	6-6 to 6-8	1.03 1.01	1.02 1.00
2-9	1.22 1.16	1.16 1.10	6-9 to 6-11	1.03 1.01	1.01 1.00
2-10	1.22 1.16	1.16 1.10	7-0 to 7-2	1.02 1.01	1.00 1.00
2-11	1.21 1.16	1.16 1.10	7-3 to 7-5	1.01 1.01	1.00 1.00
3-0	1.20 1.15	1.16 1.10	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.19 1.14	1.16 1.10	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.18 1.13	1.16 1.10	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.17 1.13	1.16 1.10	8-3 to 8-5	1.00 1.00	1.00 1.00
3-4	1.16 1.12	1.16 1.10	8-6 to 8-8	1.00 1.00	1.00 1.01
3-5	1.15 1.11	1.16 1.10	8-9 to 8-11	1.00 1.00	1.00 1.01
3-6	1.14 1.10	1.16 1.10	9-0 to 9-2	1.00 1.00	1.00 1.01
3-7	1.14 1.10	1.15 1.10	9-3 to 9-5	1.00 1.01	1.01 1.02
3-8	1.14 1.10	1.14 1.10	9-6 to 9-8	1.00 1.01	1.01 1.02
3-9	1.14 1.10	1.14 1.09	9-9 to 9-11	1.00 1.02	1.01 1.02
3-10	1.14 1.10	1.13 1.09	10-0 to 10-2	1.00 1.02	1.02 1.03
3-11	1.13 1.10	1.12 1.08	10-3 to 10-5	1.00 1.02	1.02 1.03
4-0	1.12 1.09	1.12 1.07	10-6 to 10-8	1.01 1.02	1.02 1.03
4-1	1.11 1.08	1.11 1.07	10-9 to 10-11	1.01 1.02	1.02 1.03
4-2	1.10 1.06	1.11 1.07	11-0 to 11-2	1.01 1.03	1.02 1.03
4-3	1.08 1.05	1.10 1.06	11-3 to 11-5	1.01 1.03	1.02 1.03
4-4	1.07 1.04	1.10 1.06	11-6 to 11-8	1.01 1.03	1.02 1.03
4-5	1.07 1.04	1.09 1.06	11-9 to 11-11	1.01 1.03	1.02 1.03
4-6	1.07 1.04	1.08 1.05	12-0 to 12-2	1.01 1.03	1.03 1.03
4-7	1.07 1.04	1.07 1.05	12-3 to 12-5	1.02 1.04	1.03 1.04
4-8	1.07 1.04	1.07 1.05	12-6 to 12-8	1.02 1.04	1.04 1.04
4-9	1.07 1.04	1.07 1.04	12-9 to 12-11	1.02 1.04	1.04 1.05
4-10	1.07 1.04	1.05 1.03	13-0 to 13-2	1.02 1.05	1.05 1.06
4-11	1.07 1.04	1.05 1.02	13-3 to 13-5	1.02 1.06	1.05 1.07
5-0	1.07 1.04	1.05 1.02	13-6 to 13-8	1.03 1.07	1.06 1.08
5-1	1.06 1.03	1.05 1.02	13-9 to 13-11	1.03 1.08	1.07 1.09
5-2	1.06 1.03	1.05 1.02	14-0 and up	1.04 1.09	1.08 1.10

 $[\]frac{1}{2}$ These factors were based on 14,154 records of cows that calved from November through June and on 12,447 records of those that calved from July through October.

TABLE 8.--GUERNSEY AGE ADJUSTMENT FACTORS for milk and fat production:for cows that calve in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania $\underline{1}/$

Age in	Adjustment season of		Age in years	Adjustment s	
years _ and	November	July to	and	November	July to
months _	to June Milk Fat	October Milk Fat	months _	to June Milk Fat	October Milk Fat
1-9	1.40 1.36	1.32 1.29	5-3	1.03 1.01	1.01 1.00
1-10	1.33 1.29	1.26 1.23	5-4	1.03 1.01	1.01 1.00
1-11	1.29 1.26	1.23 1.20	5-5	1.03 1.01	1.01 1.00
2-0	1.27 1.23	1.21 1.19	5-6	1.02 1.01	1.00 1.00
2-1	1.26 1.22	1.21 1.18	5-7	1.02 1.00	1.00 1.00
2-2	1.24 1.20	1.21 1.18	5-8	1.02 1.00	1.00 1.00
2-3	1.23 1.19	1.20 1.18	5-9	1.01 1.00	1.00 1.00
2-4	1.22 1.18	1.19 1.17	5-10	1.01 1.00	1.00 1.00
2-5	1.22 1.18	1.18 1.16	5-11	1.01 1.00	1.00 1.00
2-6	1.21 1.18	1.17 1.15	6-0 to 6-2	1.01 1.00	1.00 1.00
2-7	1.21 1.17	1.16 1.14	6-3 to 6-5	1.01 1.00	1.00 1.00
2-8	1.21 1.17	1.15 1.13	6-6 to 6-8	1.01 1.00	1.00 1.00
2-9	1.20 1.16	1.14 1.12	6-9 to 6-11	1.00 1.00	1.00 1.00
2-10	1.20 1.16	1.14 1.12	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.18 1.14	1.14 1.11	7-3 to 7-5	1.00 1.00	1.00 1.00
3-0	1.17 1.12	1.13 1.10	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.15 1.11	1.12 1.09	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.15 1.11	1.11 1.08	8-0 to 8-2	1.00 1.00	1.00 1.01
3-3	1.14 1.10	1.11 1.07	8-3 to 8-5	1.00 1.01	1.01 1.02
3-4	1.14 1.10	1.11 1.07	8-6 to 8-8	1.00 1.01	1.01 1.03
3-5	1.13 1.09	1.11 1.07	8-9 to 8-11	1.00 1.01	1.01 1.03
3-6	1.12 1.08	1.10 1.07	9-0 to 9-2	1.00 1.01	1.01 1.03
3-7	1.12 1.08	1.09 1.06	9-3 to 9-5	1.01 1.02	1.01 1.03
3-8	1.12 1.08	1.08 1.05	9-6 to 9-8	1.01 1.02	1.01 1.03
3-9	1.11 1.07	1.07 1.04	9-9 to 9-11	1.01 1.03	1.01 1.03
3-10	1.11 1.07	1.07 1.04	10-0 to 10-2	1.01 1.03	1.01 1.03
3-11	1.10 1.06	1.06 1.03	10-3 to 10-5	1.01 1.03	1.01 1.03
4-0	1.09 1.05	1.05 1.03	10-6 to 10-8	1.01 1.03	1.01 1.03
4-1	1.08 1.04	1.04 1.02	10-9 to 10-11	1.01 1.03	1.01 1.03
4-2	1.07 1.04	1.04 1.02	11-0 to 11-2	1.02 1.04	1.01 1.04
4-3	1.07 1.04	1.04 1.01	11-3 to 11-5	1.02 1.04	1.01 1.04
4-4	1.07 1.04	1.04 1.01	11-6 to 11-8	1.02 1.05	1.01 1.05
4-5	1.06 1.04	1.04 1.01	11-9 to 11-11	1.02 1.05	1.01 1.05
4-6	1.05 1.03	1.04 1.01	12-0 to 12-2	1.03 1.05	1.02 1.06
4-7	1.05 1.02	1.03 1.01	12-3 to 12-5	1.03 1.06	1.02 1.06
4-8	1.05 1.02	1.03 1.01	12-6 to 12-8	1.03 1.06	1.03 1.07
4-9	1.05 1.02	1.02 1.01	12-9 to 12-11	1.04 1.06	1.03 1.08
4-10	1.04 1.01	1.02 1.00	13-0 to 13-2	1.04 1.07	1.04 1.08
4-11	1.04 1.01	1.02 1.00	13-3 to 13-5	1.04 1.07	1.05 1.09
5-0	1.03 1.01	1.01 1.00	13-6 to 13-8	1.05 1.07	1.06 1.10
5-1	1.03 1.01	1.01 1.00	13-9 to 13-11	1.05 1.07	1.07 1.11
5-2	1.03 1.01	1.01 1.00	14-0 and up	1.06 1.08	1.09 1.13

^{1/} These factors were based on 42,969 records of cows that calved from November through June and on 23,489 records of those that calved from July through October.

TABLE 9.--GUERNSEY AGE ADJUSTMENT FACTORS for milk and fat production:for cows that calve in Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas $\underline{1}/$

Age in years	Adjustment season of		Age in years	Adjustment season of	
and	November	July to	and	November	July to
months	to June Milk Fat	October Milk Fat	months _	to June Milk Fat	October Milk Fat
1-9	1.36 1.32	1.26 1.23	5-3	1.03 1.01	1.02 1.00
1-10	1.30 1.26	1.22 1.19	5-4	1.03 1.01	1.02 1.00
1-11	1.26 1.23	1.20 1.17	5-5	1.02 1.01	1.02 1.00
2-0	1.24 1.21	1.19 1.16	5-6	1.02 1.01	1.02 1.00
2-1	1.22 1.19	1.18 1.16	5-7	1.01 1.00	1.01 1.00
2-2	1.21 1.18	1.18 1.15	5-8	1.01 1.00	1.01 1.00
2-3	1.19 1.17	1.17 1.14	5-9	1.01 1.00	1.01 1.00
2-4	1.19 1.16	1.16 1.14	5-10	1.01 1.00	1.01 1.00
2-5	1.18 1.15	1.16 1.13	5-11	1.01 1.00	1.01 1.00
2-6	1.18 1.14	1.15 1.12	6-0 to 6-2	1.01 1.00	1.01 1.00
2-7	1.17 1.14	1.14 1.11	6-3 to 6-5	1.01 1.00	1.01 1.00
2-8	1.17 1.14	1.14 1.10	6-6 to 6-8	1.01 1.00	1.01 1.00
2-9	1.17 1.14	1.13 1.09	6-9 to 6-11	1.00 1.00	1.01 1.00
2-10	1.17 1.14	1.12 1.08	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.16 1.13	1.11 1.07	7-3 to 7-5	1.00 1.00	1.00 1.00
3-0	1.15 1.12	1.11 1.07	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.14 1.11	1.11 1.07	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.13 1.10	1.11 1.07	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.12 1.09	1.11 1.07	8-3 to 8-5	1.00 1.01	1.00 1.00
3-4	1.11 1.08	1.11 1.07	8-6 to 8-8	1.00 1.01	1.00 1.00
3-5	1.11 1.07	1.11 1.07	8-9 to 8-11	1.01 1.02	1.00 1.00
3-6	1.10 1.06	1.10 1.06	9-0 to 9-2	1.01 1.02	1.00 1.01
3-7	1.10 1.06	1.09 1.05	9-3 to 9-5	1.01 1.02	1.01 1.02
3-8	1.10 1.06	1.08 1.04	9-6 to 9-8	1.01 1.02	1.02 1.03
3-9	1.10 1.06	1.08 1.04	9-9 to 9-11	1.01 1.03	1.03 1.04
3-10	1.10 1.06	1.07 1.03	10-0 to 10-2	1.01 1.03	1.03 1.04
3-11	1.09 1.06	1.06 1.03	10-3 to 10-5	1.01 1.03	1.03 1.05
4-0	1.08 1.05	1.06 1.02	10-6 to 10-8	1.01 1.04	1.03 1.05
4-1	1.07 1.04	1.06 1.02	10-9 to 10-11	1.01 1.04	1.03 1.05
4-2	1.07 1.04	1.05 1.02	11-0 to 11-2	1.02 1.04	1.03 1.05
4-3	1.06 1.03	1.05 1.02	11-3 to 11-5	1.02 1.05	1.03 1.05
4-4	1.05 1.03	1.05 1.01	11-6 to 11-8	1.02 1.05	1.03 1.05
4-5	1.05 1.02	1.04 1.01	11-9 to 11-11	1.02 1.06	1.04 1.06
4-6	1.04 1.02	1.04 1.01	12-0 to 12-2	1.03 1.06	1.04 1.06
4-7	1.04 1.02	1.03 1.00	12-3 to 12-5	1.03 1.07	1.04 1.07
4-8	1.04 1.02	1.03 1.00	12-6 to 12-8	1.03 1.07	1.04 1.07
4-9	1.04 1.02	1.03 1.00	12-9 to 12-11	1.04 1.07	1.05 1.08
4-10	1.04 1.02	1.03 1.00	13-0 to 13-2	1.04 1.07	1.06 1.09
4-11	1.04 1.02	1.03 1.00	13-3 to 13-5	1.04 1.07	1.07 1.10
5-0	1.04 1.02	1.03 1.00	13-6 to 13-8	1.04 1.08	1.08 1.11
5-1	1.04 1.01	1.02 1.00	13-9 to 13-11	1.05 1.08	1.09 1.13
5-2	1.03 1.01	1.02 1.00	14-0 and up	1.05 1.08	1.11 1.15

^{1/} These factors were based on 57,520 records of cows that calved from November through June and on 32,450 records of those that calved from July through October.

TABLE 10.-GUERNSEY AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkarsas, Oklahoma, and Texas 1/

Age in	Adjustment	factors by	Age in	Adjustment f season of	
years	season of November	July to	years	November	July to
months	to June	October	months	to June Milk Fat	October Milk Fat
1-9 1-10 1-11	Milk Fat 1.35 1.30 1.31 1.26 1.26 1.22	Milk Fat 1.23 1.20 1.21 1.18 1.19 1.16	5-3 5-4 5-5	1.01 1.00 1.01 1.00 1.01 1.00	1.01 1.00 1.01 1.00 1.01 1.00
2-0	1.23 1.18	1.17 1.14	5-6	1.01 1.00	1.01 1.00
2-1	1.20 1.16	1.15 1.12	5-7	1.01 1.00	1.01 1.00
2-2	1.18 1.14	1.13 1.10	5-8	1.01 1.00	1.00 1.00
2-3	1.17 1.13	1.12 1.09	5-9	1.01 1.00	1.00 1.00
2-4	1.16 1.12	1.12 1.08	5-10	1.01 1.00	1.00 1.00
2-5	1.16 1.12	1.12 1.08	5-11	1.01 1.00	1.00 1.00
2-6	1.16 1.11	1.12 1.08	6-0 to 6-2	1.00 1.00	1.00 1.00
2-7	1.16 1.11	1.12 1.08	6-3 to 6-5	1.00 1.00	1.00 1.00
2-8	1.16 1.11	1.11 1.08	6-6 to 6-8	1.00 1.00	1.00 1.00
2-9	1.16 1.11	1.10 1.07	6-9 to 6-11	1.00 1.00	1.00 1.00
2-10	1.15 1.10	1.09 1.06	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.14 1.09	1.09 1.05	7-3 to 7-5	1.00 1.00	1.00 1.01
3-0	1.13 1.08	1.09 1.05	7-6 to 7-8	1.00 1.00	1.01 1.02
3-1	1.12 1.07	1.09 1.05	7-9 to 7-11	1.00 1.01	1.01 1.02
3-2	1.11 1.06	1.09 1.05	8-0 to 8-2	1.00 1.01	1.01 1.02
3-3	1.10 1.05	1.08 1.04	8-3 to 8-5	1.00 1.01	1.01 1.02
3-4	1.09 1.04	1.07 1.03	8-6 to 8-8	1.00 1.01	1.02 1.03
3-5	1.08 1.03	1.07 1.03	8-9 to 8-11	1.01 1.02	1.02 1.04
3-6	1.07 1.03	1.07 1.03	9-0 to 9-2	1.01 1.02	1.03 1.04
3-7	1.07 1.03	1.07 1.03	9-3 to 9-5	1.01 1.03	1.03 1.04
3-8	1.07 1.03	1.06 1.03	9-6 to 9-8	1.01 1.03	1.03 1.05
3-9	1.07 1.03	1.06 1.02	9-9 to 9-11	1.02 1.04	1.04 1.05
3-10	1.07 1.03	1.06 1.02	10-0 to 10-2	1.02 1.04	1.04 1.06
3-11	1.07 1.03	1.05 1.02	10-3 to 10-5	1.03 1.05	1.04 1.06
4-0	1.07 1.03	1.05 1.02	10-6 to 10-8	1.03 1.05	1.05 1.07
4-1	1.06 1.02	1.05 1.02	10-9 to 10-11	1.03 1.06	1.05 1.07
4-2	1.06 1.02	1.05 1.02	11-0 to 11-2	1.04 1.06	1.05 1.08
4-3	1.05 1.02	1.05 1.02	11-3 to 11-5	1.04 1.07	1.06 1.08
4-4	1.04 1.01	1.05 1.02	11-6 to 11-8	1.05 1.07	1.06 1.08
4-5	1.03 1.00	1.04 1.02	11-9 to 11-11	1.05 1.08	1.06 1.09
4-6	1.03 1.00	1.04 1.01	12-0 to 12-2	1.06 1.09	1.06 1.09
4-7	1.03 1.00	1.03 1.00	12-3 to 12-5	1.06 1.10	1.07 1.09
4-8	1.03 1.00	1.02 1.00	12-6 to 12-8	1.07 1.11	1.07 1.09
4-9	1.03 1.00	1.02 1.00	12-9 to 12-11	1.08 1.12	1.07 1.10
4-10	1.03 1.00	1.02 1.00	13-0 to 13-2	1.10 1.12	1.07 1.10
4-11	1.02 1.00	1.02 1.00	13-3 to 13-5	1.11 1.13	1.08 1.11
5-0	1.02 1.00	1.01 1.00	13-6 to 13-8	1.13 1.14	1.08 1.12
5-1	1.02 1.00	1.01 1.00	13-9 to 13-11	1.14 1.15	1.08 1.13
5-2	1.02 1.00	1.01 1.00	14-0 and up	1.16 1.18	1.09 1.14

^{1/} These factors were based on 36,639 records of cows that calved from November through June and on 24,722 records of those that calved from July through October.

TABLE 11.-GUERNSEY AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii <u>1</u>/

Age in years	Adjustment season of		Age in years	Adjustment season of	
and	November	July to	and	November	July to
months	to June	October	months	to June	October
	Milk Fat	Milk Fat		Milk Fat	Milk Fat
1-9	1.35 1.32	1.32 1.29	5-3	1.03 1.01	1.03 1.01
1-10	1.30 1.28	1.28 1.26	5-4	1.03 1.01	1.03 1.01
1-11	1.27 1.24	1.25 1.24	5-5	1.03 1.01	1.03 1.01
2-0	1.25 1.22	1.23 1.22	5-6	1.03 1.01	1.03 1.01
2-1	1.23 1.21	1.21 1.20	5-7	1.03 1.01	1.03 1.01
2-2	1.22 1.20	1.20 1.19	5-8	1.03 1.00	1.03 1.01
2-3	1.21 1.18	1.20 1.18	5-9	1.02 1.00	1.03 1.01
2-4	1.20 1.17	1.19 1.17	5-10	1.02 1.00	1.03 1.01
2-5	1.19 1.16	1.18 1.16	5-11	1.02 1.00	1.03 1.01
2-6	1.19 1.15	1.17 1.15	6-0 to 6-2	1.02 1.00	1.02 1.01
2-7	1.19 1.15	1.16 1.14	6-3 to 6-5	1.01 1.00	1.02 1.00
2-8	1.19 1.15	1.15 1.13	6-6 to 6-8	1.01 1.00	1.01 1.00
2-9	1.18 1.15	1.14 1.12	6-9 to 6-11	1.01 1.00	1.01 1.00
2-10	1.17 1.14	1.13 1.11	7-0 to 7-2	1.01 1.00	1.01 1.00
2-11	1.16 1.13	1.13 1.11	7-3 to 7-5	1.01 1.00	1.01 1.00
3-0	1.15 1.12	1.12 1.10	7-6 to 7-8	1.01 1.00	1.01 1.00
3-1	1.14 1.11	1.12 1.09	7-9 to 7-11	1.01 1.00	1.00 1.00
3-2	1.14 1.10	1.12 1.09	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.13 1.09	1.12 1.09	8-3 to 8-5	1.00 1.00	1.00 1.01
3-4	1.12 1.09	1.12 1.09	8-6 to 8-8	1.00 1.00	1.00 1.01
3-5	1.12 1.08	1.12 1.08	8-9 to 8-11	1.00 1.00	1.00 1.01
3-6	1.11 1.07	1.12 1.08	9-0 to 9-2	1.00 1.00	1.01 1.02
3-7	1.11 1.07	1.11 1.07	9-3 to 9-5	1.00 1.01	1.01 1.02
3-8	1.10 1.06	1.11 1.07	9-6 to 9-8	1.00 1.01	1.02 1.02
3-9	1.10 1.06	1.10 1.07	9-9 to 9-11	1.01 1.02	1.02 1.03
3-10	1.10 1.06	1.09 1.06	10-0 to 10-2	1.01 1.02	1.02 1.03
3-11	1.09 1.06	1.08 1.06	10-3 to 10-5	1.02 1.03	1.02 1.03
4-0	1.09 1.05	1.08 1.05	10-6 to 10-8	1.02 1.03	1.02 1.03
4-1	1.08 1.05	1.08 1.05	10-9 to 10-11	1.02 1.04	1.02 1.03
4-2	1.07 1.04	1.07 1.05	11-0 to 11-2	1.03 1.05	1.02 1.03
4-3	1.07 1.04	1.07 1.05	11-3 to 11-5	1.03 1.05	1.02 1.03
4-4	1.06 1.03	1.06 1.04	11-6 to 11-8	1.03 1.05	1.02 1.03
4-5	1.06 1.03	1.06 1.03	11-9 to 11-11	1.03 1.06	1.02 1.04
4-6	1.05 1.02	1.05 1.03	12-0 to 12-2	1.04 1.06	1.03 1.04
4-7	1.05 1.02	1.05 1.02	12-3 to 12-5	1.04 1.07	1.03 1.04
4-8	1.04 1.01	1.05 1.02	12-6 to 12-8	1.05 1.07	1.03 1.04
4-9	1.04 1.01	1.05 1.02	12-9 to 12-11	1.05 1.08	1.03 1.04
4-10	1.04 1.01	1.04 1.02	13-0 to 13-2	1.06 1.08	1.03 1.05
4-11	1.04 1.01	1.04 1.02	13-3 to 13-5	1.06 1.08	1.03 1.05
5-0	1.04 1.01	1.04 1.02	13-6 to 13-8	1.07 1.09	1.03 1.05
5-1	1.04 1.01	1.04 1.02	13-9 to 13-11	1.07 1.10	1.03 1.05
5-2	1.04 1.01	1.03 1.02	14-0 and up	1.08 1.12	1.04 1.06

^{1/} These factors were based on 50,522 records of cows that calved from November through June and on 28,520 records of those that calved from July through October.

TABLE 12.-HOLSTEIN AGE ADJUSTMENT FAC fat production: for cows that calve in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, and New York 1/

Age in years	Adjustment i		Age in years	Adjustment : season of	
and	November	July to	and	November	July to
months	to June	October	months	to June	October
	Milk Fat	Milk Fat		Milk Fat	Milk Fat
1-9	1.44 1.42	1.38 1.36	5-3	1.03 1.02	1.03 1.01
1-10	1.40 1.38	1.35 1.32	5-4	1.02 1.01	1.03 1.01
1-11	1.38 1.36	1.33 1.30	5-5	1.02 1.01	1.03 1.01
2-0	1.36 1.34	1.31 1.29	5-6	1.02 1.01	1.03 1.01
2-1	1.35 1.33	1.31 1.29	5-7	1.02 1.01	1.03 1.01
2-2	1.34 1.32	1.31 1.29	5-8	1.02 1.01	1.03 1.01
2-3	1.34 1.31	1.31 1.29	5-9	1.02 1.01	1.02 1.01
2-4	1.33 1.31	1.31 1.28	5-10	1.01 1.01	1.02 1.01
2-5	1.33 1.31	1.30 1.28	5-11	1.01 1.00	1.01 1.00
2-6	1.33 1.30	1.29 1.26	6-0 to 6-2	1.01 1.00	1.01 1.00
2-7	1.32 1.30	1.27 1.24	6-3 to 6-5	1.00 1.00	1.00 1.00
2-8	1.32 1.29	1.25 1.23	6-6 to 6-8	1.00 1.00	1.00 1.00
2-9	1.31 1.28	1.24 1.21	6-9 to 6-11	1.00 1.00	1.00 1.00
2-10	1.29 1.27	1.23 1.20	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.26 1.24	1.22 1.19	7-3 to 7-5	1.00 1.00	1.00 1.00
3-0	1.23 1.21	1.20 1.18	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.20 1.19	1.19 1.16	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.19 1.17	1.18 1.15	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.18 1.16	1.17 1.15	8-3 to 8-5	1.00 1.01	1.00 1.01
3-4	1.17 1.15	1.17 1.15	8-6 to 8-8	1.01 1.02	1.00 1.01
3-5	1.16 1.15	1.17 1.14	8-9 to 8-11	1.01 1.02	1.00 1.01
3-6	1.16 1.15	1.16 1.13	9-0 to 9-2	1.01 1.02	1.00 1.02
3-7	1.16 1.15	1.14 1.13	9-3 to 9-5	1.01 1.02	1.01 1.03
3-8	1.16 1.15	1.13 1.12	9-6 to 9-8	1.02 1.03	1.02 1.04
3-9	1.16 1.14	1.12 1.10	9-9 to 9-11	1.02 1.03	1.02 1.04
3-10	1.15 1.13	1.11 1.09	10-0 to 10-2	1.02 1.04	1.03 1.05
3-11	1.13 1.11	1.10 1.08	10-3 to 10-5	1.03 1.05	1.03 1.05
4-0	1.11 1.10	1.08 1.07	10-6 to 10-8	1.03 1.05	1.04 1.06
4-1	1.09 1.08	1.08 1.06	10-9 to 10-11	1.03 1.05	1.04 1.06
4-2	1.08 1.07	1.07 1.05	11-0 to 11-2	1.03 1.05	1.05 1.07
4-3	1.07 1.06	1.07 1.05	11-3 to 11-5	1.04 1.06	1.05 1.07
4-4	1.07 1.06	1.07 1.05	11-6 to 11-8	1.04 1.06	1.05 1.07
4-5	1.06 1.05	1.07 1.05	11-9 to 11-11	1.04 1.07	1.06 1.07
4-6	1.06 1.05	1.07 1.05	12-0 to 12-2	1.05 1.07	1.06 1.08
4-7	1.06 1.05	1.06 1.04	12-3 to 12-5	1.05 1.08	1.07 1.08
4-8	1.06 1.05	1.05 1.03	12-6 to 12-8	1.06 1.08	1.07 1.08
4-9	1.06 1.05	1.04 1.03	12-9 to 12-11	1.06 1.09	1.08 1.09
4-10	1.06 1.05	1.03 1.02	13-0 to 13-2	1.07 1.10	1.08 1.09
4-11	1.05 1.04	1.03 1.02	13-3 to 13-5	1.08 1.10	1.08 1.10
5-0	1.04 1.03	1.03 1.01	13-6 to 13-8	1.09 1.11	1.08 1.11
5-1	1.04 1.03	1.03 1.01	13-9 to 13-11	1.10 1.12	1.08 1.12
5-2	1.03 1.02	1.03 1.01	14-0 and up	1.12 1.14	1.09 1.13

 $[\]underline{1}/$ These factors were based on 91,883 records of cows that calved from November through June and on 68,869 records of those that calved from July through October.

TABLE 13.-HOLSTEIN AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in New Jersey and Pennsylvania $\underline{1}/$

Age in years			factors calvin		Age in years			factors	
and	Nove	November to June		to	and	November		July to	
months	Milk	Fat	Octo Milk	Fat	_ months _	to J Milk	une Fat	Octo Milk	Fat
1-9	1.44	1.40	1.39	1.36	5-3	1.03	1.01	1.03	1.02
1-10	1.40	1.36	1.34	1.31	5-4	1.02	1.01	1.03	1.02
1-11	1.37	1.33	1.31	1.28	5-5	1.02	1.01	1.03	1.02
2-0	1.35	1.31	1.29	1.27	5-6	1.02	1.01	1.03	1.02
2-1	1.33	1.29	1.29	1.26	5-7	1.02	1.01	1.03	1.01
2-2	1.32	1.28	1.28	1.25	5-8	1.02	1.01	1.02	1.01
2-3	1.31	1.27	1.28	1.25	5-9	1.02	1.01	1.01	1.00
2-4	1.30	1.26	1.28	1.25	5-10	1.02	1.01	1.01	1.00
2-5	1.29	1.26	1.27	1.25	5-11	1.01	1.00	1.01	1.00
2-6	1.29	1.26	1.26	1.24	6-0 to 6-2	1.01	1.00	1.00	1.00
2-7	1.29	1.26	1.25	1.22	6-3 to 6-5	1.01	1.00	1.00	1.00
2-8	1.28	1.25	1.23	1.21	6-6 to 6-8	1.00	1.00	1.00	1.00
2-9	1.26	1.23	1.22	1.19	6-9 to 6-11	1.00	1.00	1.00	1.00
2-10	1.25	1.22	1.20	1.18	7-0 to 7-2	1.00	1.00	1.00	1.00
2-11	1.23	1.20	1.19	1.16	7-3 to 7-5	1.00	1.00	1.00	1.00
3-0	1.21	1.18	1.17	1.15	7-6 to 7-8	1.00	1.00	1.00	1.00
3-1	1.19	1.16	1.17	1.14	7-9 to 7-11	1.00	1.00	1.00	1.00
3-2	1.18	1.15	1.17	1.14	8-0 to 8-2	1.00	1.01	1.00	1.00
3-3	1.16	1.14	1.17	1.14	8-3 to 8-5	1.00	1.01	1.01	1.01
3-4	1.15	1.13	1.17	1.14	8-6 to 8-8	1.00	1.01	1.01	1.01
3-5	1.15	1.13	1.16	1.14	8-9 to 8-11	1.01	1.02	1.01	1.02
3-6	1.15	1.13	1.15	1.13	9-0 to 9-2	1.02	1.02	1.01	1.02
3-7	1.15	1.13	1.14	1.12	9-3 to 9-5	1.02	1.02	1.02	1.03
3-8	1.14	1.13	1.13	1.11	9-6 to 9-8	1.02	1.03	1.02	1.04
3-9	1.13	1.12	1.12	1.10	9-9 to 9-11	1.03	1.04	1.02	1.04
3-10	1.12	1.11	1.10	1.08	10-0 to 10-2	1.03	1.04	1.02	1.04
3-11	1.11	1.09	1.09	1.07	10-3 to 10-5	1.03	1.04	1.02	1.04
4-0	1.10	1.08	1.08	1.06	10-6 to 10-8	1.03	1.05	1.03	1.05
4-1	1.09	1.07	1.07	1.05	10-9 to 10-11	1.04	1.05	1.03	1.05
4-2	1.08	1.06	1.07	1.05	11-0 to 11-2	1.04	1.06	1.04	1.06
4-3	1.07	1.05	1.07	1.05	11-3 to 11-5	1.04	1.06	1.04	1.06
4-4	1.06	1.04	1.07	1.05	11-6 to 11-8	1.05	1.06	1.04	1.06
4-5	1.06	1.04	1.07	1.05	11-9 to 11-11	1.05	1.07	1.05	1.06
4-6	1.06	1.04	1.06	1.05	12-0 to 12-2	1.05	1.07	1.05	1.07
4-7	1.06	1.04	1.05	1.04	12-3 to 12-5	1.06	1.08	1.06	1.07
4-8	1.06	1.04	1.05	1.03	12-6 to 12-8	1.06	1.09	1.06	1.07
4-9	1.06	1.04	1.04	1.02	12-9 to 12-11	1.07	1.10	1.06	1.08
4-10	1.05	1.04	1.03	1.02	13-0 to 13-2	1.08	1.10	1.07	1.08
4-11	1.05	1.04	1.03	1.02	13-3 to 13-5	1.09	1.11	1.07	1.09
5-0	1.04	1.03	1.03	1.02	13-6 to 13-8	1.10	1.12	1.08	1.10
5-1	1.03	1.02	1.03	1.02	13-9 to 13-11	1.11	1.14	1.09	1.11
5-2	1.03	1.02	1.03	1.02	14-0 and up	1.12	1.16	1.10	1.13

^{1/} These factors were based on 78,968 records of cows that calved from November through June and on 49,064 records of those that calved from July through October.

TABLE 14.--HOLSTEIN AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas 1/

	Age in	Adjustment		Age in	Adjustment	
The part The part						
1-9		to June	October	months		
1-10 1.35 1.33 1.28 1.26 5.4 1.02 1.01 1.02 1.01 2-0 1.30 1.28 1.25 1.23 5-5 1.02 1.01 1.02 1.01 2-1 1.29 1.27 1.24 1.22 5-7 1.02 1.01 1.02 1.01 2-2 1.28 1.23 1.21 5-8 1.02 1.01 1.02 1.01 1.02 1.01 1.02 1.01 1.02 1.01 1.02 1.01 1.01 1.00 1.01 1.02 1.01 1.01 1.00		Milk Fat	Milk Fat		Milk Fat	MIIK Fat
2-0 1.30 1.28 1.27 1.29 1.27 1.24 1.23 5-7 1.02 1.01 1.01		1.35 1.33				
2-1	1-11	1.32 1.30	1.26 1.24	5-5	1.02 1.01	1.02 1.01
2-2	2-0		1.25 1.23	5-6	1.02 1.01	1.02 1.01
2-3 1.26 1.24 1.23 1.21 5-9 1.25 1.23 1.22 1.20 5-10 1.01 1.01 1.01 1.00 1.02 1.02 1.25 1.23 1.22 1.20 5-11 1.01 1.01 1.00 1.00 1.00 1.02 2-6 1.24 1.22 1.21 1.19 6-0 to 6-2 1.01 1.00 1.00 1.00 1.02 2-7 1.24 1.22 1.21 1.18 6-3 to 6-5 1.00 1.00 1.00 1.00 1.00 1.00 2-7 1.24 1.22 1.21 1.18 6-3 to 6-5 1.00 1.00 1.00 1.00 1.00 1.00 2-9 1.24 1.21 1.19 1.16 6-9 to 6-11 1.00 1.00 1.00 1.00 1.00 1.00 2-10 1.23 1.21 1.18 1.15 7-0 to 7-2 1.00 1.00 1.00 1.00 1.00 1.00 2-11 1.21 1.19 1.17 1.14 7-3 to 7-5 1.00 1.00 1.00 1.00 1.00 3-1 1.18 1.16 1.15 1.13 7-9 to 7-11 1.00 1.00 1.00 1.00 1.00 3-1 1.18 1.16 1.15 1.13 7-9 to 7-11 1.00 1.00 1.00 1.00 3-2 1.16 1.15 1.14 1.12 8-0 to 8-2 1.00 1.00 1.00 1.00 1.00 3-3 3-4 1.14 1.13 1.14 1.12 8-6 to 8-8 1.01 1.01 1.02 1.01 1.03 3-5 1.13 1.12 1.14 1.12 8-6 to 8-8 1.01 1.01 1.02 1.01 1.03 3-8 1.12 1.11 1.13 1.11 1.19 3-8 4-0 1.12 1.10 1.00 1.00 3-1 1.13 1.11 1.13 1.11 3-10 1.00 1.00 1.00 1.00 1.00 3-1 1.14 1.15 1.15 1.15 1.15 1.15 1.15 1.1			1.24 1.22			
2-4 2-5 1.25 1.25 1.22 1.22 1.22 1.22 1.22 1.22	Z - Z	1.20 1.23	1.23 1.21			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			1.23 1.21			
2-7 1.24 1.22 1.21 1.18 6-3 to 6-5 1.00						
2-7 1.24 1.22 1.21 1.18 6-3 to 6-5 1.00	2 (1 2/ 1 22	1 21 1 10	6 0 to 6 2	1 01 1 00	1 00 1 00
2-9 1.24 1.21 1.19 1.16 2-10 1.23 1.21 1.18 1.15 7-0 to 7-2 1.00 1.00 1.00 1.00 1.00 2-11 1.21 1.19 1.17 1.14 7-3 to 7-5 1.00 1.00 1.00 1.00 1.00 3-0 1.19 1.17 1.16 1.13 7-6 to 7-8 1.00 1.00 1.00 1.00 3-1 1.18 1.16 1.15 1.13 7-9 to 7-11 1.00 1.00 1.00 1.00 3-2 1.16 1.15 1.14 1.12 8-0 to 8-2 1.00 1.00 1.00 1.00 1.00 3-2 1.16 1.15 1.14 1.12 8-0 to 8-2 1.00 1.00 1.00 1.00 1.00 3-3 3-3 1.15 1.14 1.14 1.12 8-3 to 8-5 1.14 1.13 1.14 1.12 8-3 to 8-5 1.13 1.12 1.14 1.12 8-9 to 8-11 1.01 1.02 1.01 1.01 3-5 1.13 1.12 1.14 1.12 8-9 to 8-11 1.01 1.02 1.01 1.02 3-6 1.13 1.11 1.13 1.11 9-0 to 9-2 3-7 1.12 1.11 1.12 1.10 9-3 to 9-5 1.12 1.11 1.11 1.10 9-6 to 9-2 1.01 1.02 1.01 1.02 3-9 1.12 1.10 1.10 1.08 9-9 to 9-1 1.02 1.03 1.02 1.03 3-9 1.12 1.10 1.00 1.08 9-9 to 9-1 1.02 1.03 1.02 1.03 3-9 1.11 1.10 1.09 1.08 1.06 1.04 10-3 to 10-5 1.03 1.04 1.03 1.05 4-0 1.09 1.08 1.07 1.06 1.04 10-9 to 10-11 1.03 1.05 1.03 1.05 4-1 1.08 1.07 1.06 1.06 1.04 11-0 to 11-2 1.04 1.06 1.03 1.05 4-2 1.07 1.06 1.06 1.04 11-0 to 11-2 1.04 1.06 1.04 1.06 4-5 1.05 1.03 1.04 1.06 1.04 11-0 to 11-2 1.04 1.06 1.04 1.06 4-7 1.05 1.03 1.04 1.06 1.04 11-0 to 11-2 1.04 1.06 1.04 1.06 4-9 1.04 1.03 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.08 1.07 1.09 4-10 1.04 1.03 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.08 1.07 1.09 4-10 1.04 1.03 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.04 1.03 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.04 1.03 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.10 1.08 1.10						
2-10 2-11 1.23 1.21 1.18 1.19 1.17 1.17 1.14 1.14 7-0 to 7-2 7-3 to 7-5 1.00 1.00 1.00 1.00 <td>2-8</td> <td>1.24 1.22</td> <td>1.20 1.17</td> <td>6-6 to 6-8</td> <td>1.00 1.00</td> <td>1.00 1.00</td>	2-8	1.24 1.22	1.20 1.17	6-6 to 6-8	1.00 1.00	1.00 1.00
2-11 1.21 1.19 1.17 1.14 7-3 to 7-5 1.00 1.00 1.00 1.00 3-0 1.19 1.17 1.16 1.13 7-6 to 7-8 1.00 1.00 1.00 1.00 3-1 1.18 1.16 1.15 1.13 7-9 to 7-11 1.00 1.00 1.00 1.00 3-2 1.16 1.15 1.14 1.12 8-0 to 8-2 1.00 1.00 1.00 1.00 3-4 1.14 1.13 1.14 1.12 8-3 to 8-5 1.00 1.01 1.01 1.01 3-6 1.13 1.12 1.14 1.12 8-9 to 8-11 1.01 1.02 1.01 1.02 3-7 1.12 1.11 1.13 1.11 1.09 9-0 to 9-2 1.01 1.02 1.01 1.02 3-7 1.12 1.11 1.10 1.09 9-6 to 9-8 1.02 1.01 1.03 3-7 1.12 1.11 1.1	2-9	1.24 1.21	1.19 1.16	6-9 to 6-11	1.00 1.00	1.00 1.00
3-0 3-1 1.19 1.17 1.16 1.13 7-6 to 7-8 1.00 1.00 1.00 1.00 1.00 1.00 3-1 1.18 1.16 1.15 1.14 1.12 8-0 to 8-2 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0						
3-1	Z=11	1.21 1.19	1.1/ 1.14	7=3 LO 7=3	1.00 1.00	1.00 1.00
3-2 1.16 1.15 1.14 1.12 8-0 to 8-2 1.00 1.00 1.01 3-3 1.15 1.14 1.14 1.12 8-3 to 8-5 1.00 1.01 1.01 1.01 3-4 1.14 1.13 1.14 1.12 8-6 to 8-8 1.01 1.01 1.01 1.01 1.01 3-5 1.13 1.11 1.14 1.12 8-9 to 8-11 1.01 1.02 1.01 1.02 3-6 1.13 1.11 1.12 1.10 9-2 to 9-2 1.01 1.02 1.01 1.02 3-7 1.12 1.11 1.11 1.09 9-3 to 9-5 1.01 1.02 1.01 1.03 3-8 1.12 1.11 1.10 1.08 9-9 to 9-11 1.02 1.04 1.02 1.04 3-10 1.11 1.10 1.08 9-9 to 9-11 1.02 1.04 1.02 1.04 3-10 1.11 1.10 1.08 1						
3-3 3-4 1.15 1.14 1.13 1.14 1.12 3-5 1.13 1.12 1.14 1.12 3-6 1.00 1.01 1.01 1.01 1.01 1.01 1.01 1.0						
3-4 3-5 1.14 1.13 1.12 1.14 1.12 1.14 1.12 8-9 to 8-11 1.01 1.01 1.02 1.01 1.02 3-6 1.13 1.11 1.13 1.11 1.13 1.11 1.13 1.11 1.10 9-0 to 9-2 1.01 1.02 1.01 1.02 3-7 1.12 1.11 1.12 1.10 9-3 to 9-5 1.01 1.02 1.01 1.02 1.01 3-8 1.12 1.11 1.11 1.10 9-6 to 9-8 1.02 1.03 1.02 1.03 3-9 1.12 1.10 1.10 1.09 1.08 9-9 to 9-11 1.02 1.04 1.02 1.04 3-10 1.11 1.10 1.09 1.08 1.07 10-0 to 10-2 1.03 1.04 1.02 1.04 3-11 1.10 1.09 1.08 1.07 1.06 1.03 1.05 4-1 1.08 1.07 1.06 1.04 1.09 1.08 1.07 1.06 1.04 1.09 1.08 1.07 1.06 1.04 1.05 1.06 1.04 1.05 1.07 1.06 1.04 1.05 1.06 1.04 1.05 1.06 1.04 1.05 1.06 1.04 1.06 1.04 1.06 1.05 1.06 1.04 1.06 1.04 1.06 1.05 1.06 1.04 1.06 1.04 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06						
3-5						
3-7 3-8 1.12 1.11 1.11 1.10 9-3 to 9-5 9-6 to 9-8 1.02 1.03 1.02 1.03 1.02 1.03 3-9 1.12 1.10 1.10 1.09 1.07 1.0-0 to 10-2 1.03 1.04 1.02 1.04 1.02 1.04 1.05 1.08 1.07 1.06 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.09 1.08 1.07 1.06 1.09 1.09 1.08 1.07 1.06 1.09 1.09 1.08 1.07 1.06 1.06 1.04 11-0 to 11-2 1.04 1.06 1.04 1.06 1.04 1.06 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.06 1.08 1.06 1.08 1.07 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.01 1.01 1.02 1.01 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.03 1.02 1.01 1.03 1.03 1.03 1.03 1.03 1.03 1.03						
3-7 3-8 1.12 1.11 1.11 1.10 9-3 to 9-5 9-6 to 9-8 1.02 1.03 1.02 1.03 1.02 1.03 3-9 1.12 1.10 1.10 1.09 1.07 1.0-0 to 10-2 1.03 1.04 1.02 1.04 1.02 1.04 1.05 1.08 1.07 1.06 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.08 1.07 1.06 1.09 1.09 1.08 1.07 1.06 1.09 1.09 1.08 1.07 1.06 1.09 1.09 1.08 1.07 1.06 1.06 1.04 11-0 to 11-2 1.04 1.06 1.04 1.06 1.04 1.06 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.03 1.05 1.06 1.08 1.06 1.08 1.07 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.04 1.08 1.09 1.01 1.01 1.02 1.01 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.02 1.01 1.03 1.03 1.02 1.01 1.03 1.03 1.03 1.03 1.03 1.03 1.03	3-6	1.13 1.11	1.13 1.11	9-0 to 9-2	1.01 1.02	1.01 1.02
3-9	3-7	1.12 1.11	1.12 1.10		1.01 1.02	1.01 1.03
3-10 3-11 1.11 1.10 1.09 1.08 1.06 1.0-0 to 10-2 1.03 1.04 1.03 1.04 1.03 1.05 4-0 1.09 1.08 1.07 1.06 1.04 1.09 1.08 1.07 1.06 1.04 1.09 1.08 1.07 1.06 1.04 1.09 1.08 1.07 1.06 1.04 1.09 1.08 1.07 1.06 1.06 1.04 1.09 1.08 1.07 1.06 1.06 1.06 1.06 1.06 1.07 1.06 1.06 1.06 1.06 1.07 1.06 1.06 1.06 1.06 1.07 1.06 1.06 1.06 1.06 1.07 1.06 1.06 1.06 1.06 1.07 1.06 1.08 1.09 1.09 1.09 1.09 1.09 1.09 1.09 1.09	3-8	1.12 1.11	1.11 1.09	9-6 to 9-8	1.02 1.03	1.02 1.03
3-11						
4-0						
4-1						
4-2 1.07 1.06 1.06 1.04 11-0 to 11-2 1.04 1.06 1.03 1.05 4-3 1.06 1.05 1.06 1.04 11-3 to 11-5 1.04 1.06 1.04 1.06 4-4 1.05 1.04 1.06 1.04 11-6 to 11-8 1.04 1.06 1.04 1.06 4-5 1.05 1.04 1.06 1.04 11-9 to 11-11 1.05 1.07 1.04 1.07 4-6 1.05 1.03 1.04 1.03 12-0 to 12-2 1.05 1.07 1.05 1.07 4-7 1.05 1.03 1.04 1.03 1.02 12-3 to 12-5 1.06 1.08 1.05 1.08 4-8 1.04 1.03 1.03 1.02 12-6 to 12-8 1.06 1.08 1.06 1.09 4-9 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.11 1.08 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>						
4-4						
4-4	4-3	1.06 1.05	1.06 1.04	11-3 to 11-5	1.04 1.06	1.04 1.06
4-6 1.05 1.03 1.05 1.03 12-0 to 12-2 1.05 1.07 1.05 1.07 4-7 1.05 1.03 1.04 1.03 12-3 to 12-5 1.06 1.08 1.05 1.08 4-8 1.04 1.03 1.03 1.02 12-6 to 12-8 1.06 1.08 1.06 1.08 4-9 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-11 1.04 1.03 1.02 1.01 13-3 to 13-5 1.08 1.11 1.08 1.10 5-0 1.04 1.03 1.02 1.01 13-6 to 13-8 1.09 1.12 1.09 1.11 5-1 1.03 1.02 1.01 13-9 to 13-11 1.10 1.13 1.10 1.13	4-4	1.05 1.04	1.06 1.04	11-6 to 11-8	1.04 1.06	1.04 1.06
4-7 1.05 1.03 1.04 1.03 12-3 to 12-5 1.06 1.08 1.05 1.08 4-8 1.04 1.03 1.02 12-6 to 12-8 1.06 1.08 1.06 1.08 4-9 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 1.06 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-11 1.04 1.03 1.02 1.01 13-3 to 13-5 1.08 1.11 1.08 1.10 5-0 1.04 1.03 1.02 1.01 13-6 to 13-8 1.09 1.12 1.09 1.11 5-1 1.03 1.02 1.01 13-9 to 13-11 1.10 1.13 1.10 1.13	4-5	1.05 1.04	1.06 1.04	11-9 to 11-11	1.05 1.07	1.04 1.07
4-8 1.04 1.03 1.03 1.02 12-6 to 12-8 1.06 1.08 1.06 1.08 4-9 1.04 1.03 1.02 12-9 to 12-11 1.07 1.09 1.06 1.09 4-10 1.04 1.03 1.02 1.01 13-0 to 13-2 1.08 1.10 1.07 1.09 4-11 1.04 1.03 1.02 1.01 13-3 to 13-5 1.08 1.11 1.08 1.10 5-0 1.04 1.03 1.02 1.01 13-6 to 13-8 1.09 1.12 1.09 1.11 5-1 1.03 1.02 1.01 13-9 to 13-11 1.10 1.13 1.10 1.13						
4-9 4-10 4-10 4-11 1.04 1.03 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.04 1.03 1.02 1.01 1.04 1.05 1.06 1.09 1.08 1.10 1.08 1.10 1.08 1.10 1.08 1.10 1.08 1.10 1.08 1.10 1.08 1.10 1.09 1.11 1.08 1.10 1.11 1.10 1.13						
4-10					_	
4-11 1.04 1.03 1.02 1.01 13-3 to 13-5 1.08 1.11 1.08 1.10 5-0 1.04 1.03 1.02 1.01 13-6 to 13-8 1.09 1.12 1.09 1.11 5-1 1.03 1.02 1.01 13-9 to 13-11 1.10 1.13 1.10 1.13						
5-1 1.03 1.02 1.02 1.01 13-9 to 13-11 1.10 1.13 1.10 1.13						
5-1 1.03 1.02 1.02 1.01 13-9 to 13-11 1.10 1.13 1.10 1.13	5-0	1.04 1.03	1.02 1.01	13-6 to 13-8	1 00 1 12	1 00 1 11
	5-1	1.03 1.02	1.02 1.01	13-9 to 13-11	1.10 1.13	1.10 1.13
5-2 1.03 1.02 1.01 14-0 and up 1.12 1.15 1.12 1.16	5-2	1.03 1.02	1.02 1.01	14-0 and up	1.12 1.15	1.12 1.16

^{1/} These factors were based on 222,032 records of cows that calved from November through June and on 153,263 records of those that calved from July through October.

TABLE 15.--HOLSTEIN AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Delaware, Maryland, Virginia, Kentucky, Tennessee, North Carolina, West Virginia, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Arkansas 1/

Age in years		ment factors on of calving		Age in years		stment fa		
and months	November to June	er July	to	and months	Nover to Ju	mber	July Octol	to
	Milk H	Fat Milk	Fat		Milk	Fat	Milk	Fat
1-9	1.44 1.	.46 1.36	1.34	5-3	1.04	1.03	1.02	1.01
1-10		.40 1.33	1.30	5-4	1.03	1.02	1.02	1.01
1-11		.34 1.30	1.27	5-5	1.02	1.01	1.02	1.01
2-0	1.30 1.	.30 1.28	1.25	5-6	1.02	1.01	1.02	1.01
2-1		.27 1.27	1.24	5-7	1.02	1.01	1.02	1.01
2-2		.26 1.25	1.23	5-8	1.02	1.01	1.02	1.01
2-3	1.27 1.	.25 1.24	1.22	5-9	1.02	1.01	1.02	1.01
2-4		.24 1.24	1.21	5-10	1.02	1.01	1.01	1.00
2-5		.23 1.23	1.20	5-11	1.01	1.00	1.00	1.00
2-6	1.25 1.	.22 1.23	1.20	6-0 to 6-2	1.01	1.00	1.00	1.00
2-7		.22 1.22	1.19	6-3 to 6-5	1.00	1.00	1.00	1.00
2-8		.21 1.21	1.18	6-6 to 6-8	1.00	1.00	1.00	1.00
2-9	1.24 1.	.21 1.19	1.17	6-9 to 6-11	1.00	1.00	1.00	1.00
2-10		.21 1.18	1.16	7-0 to 7-2	1.00	1.00	1.00	1.00
2-11		.20 1.17	1.15	7-3 to 7-5	1.00	1.00	1.00	1.00
3-0	1.19 1.	.19 1.17	1.14	7-6 to 7-8	1.00	1.00	1.00	1.01
3-1		.17 1.16	1.13	7-9 to 7-11	1.00	1.00	1.00	1.01
3-2		.15 1.15	1.13	8-0 to 8-2	1.00	1.00	1.00	1.01
3-3	1.15 1.	.14 1.15	1.12	8-3 to 8-5	1.00	1.00	1.01	1.02
3-4		.13 1.15	1.12	8-6 to 8-8	1.00	1.00	1.01	1.02
3-5		.12 1.15	1.12	8-9 to 8-11	1.00	1.01	1.02	1.03
3-6	1.12 1.	.11 1.14	1.11	9-0 to 9-2	1.01	1.01	1.02	1.03
3-7		.11 1.13	1.10	9-3 to 9-5	1.01	1.01	1.03	1.04
3-8		.11 1.12	1.09	9-6 to 9-8	1.01	1.02	1.03	1.04
3-9	1.12 1.	.11 1.10	1.08	9-9 to 9-11	1.02	1.03	1.03	1.04
3-10		.11 1.09	1.07	10-0 to 10-2	1.02	1.03	1.03	1.04
3-11		.11 1.08	1.06	10-3 to 10-5	1.02	1.03	1.03	1.04
4-0	1.10 1.	.10 1.07	1.05	10-6 to 10-8	1.02	1.03	1.03	1.04
4-1		.08 1.07	1.05	10-9 to 10-11	1.02	1.03	1.03	1.05
4-2		.07 1.07	1.05	11-0 to 11-2	1.02	1.04	1.03	1.05
4-3	1.07 1	.06 1.07	1.05	11-3 to 11-5	1.03	1.04	1.03	1.05
4-4		.05 1.06	1.05	11-6 to 11-8	1.03	1.04	1.04	1.06
4-5		.05 1.06	1.04	11-9 to 11-11	1.03	1.05	1.04	1.06
4-6	1.05 1	.04 1.06	1.04	12-0 to 12-2	1.04	1.05	1.04	1.07
4-7		.04 1.05	1.04	12-3 to 12-5	1.04	1.06	1.05	1.07
4-8		.04 1.05	1.03	12-6 to 12-8	1.05	1.06	1.05	1.08
4-9	1.05 1	.04 1.04	1.02	12-9 to 12-11	1.06	1.07	1.06	1.09
4-10		.04 1.03	1.01	13-0 to 13-2	1.06	1.08	1.06	1.10
4-11		.04 1.02	1.01	13-3 to 13-5	1.07	1.09	1.07	1.11
5-0	1.05 1	.03 1.02	1.01	13-6 to 13-8	1.08	1.10	1.08	1.12
5-1		.03 1.02	1.01	13-9 to 13-11	1.09	1.11	1.10	1.13
5-2		.03 1.02	1.01	14-0 and up	1.11	1.14	1.12	1.16

^{1/} These factors were based on 42,638 records of cows that calved from November through June and on 37,342 records of those that calved from July through October.

TABLE 16.--HOLSTEIN AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, Alaska, and Hawaii $\underline{1}/$

Age in years	Adjustment season of		Age in years	Adjustment : season of	
and	November	July to	and	November	July to
months	to June Milk Fat	October Milk Fat	months _	to June Milk Fat	October Milk Fat
1-9	1.43 1.40	1.38 1.35	5-3	1.03 1.02	1.03 1.01
1-10	1.38 1.35	1.34 1.31	5-4	1.03 1.02	1.03 1.01
1-11	1.34 1.31	1.31 1.28	5-5	1.02 1.02	1.03 1.01
2-0	1.31 1.28	1.28 1.26	5-6	1.02 1.01	1.03 1.01
2-1	1.29 1.26	1.27 1.24	5-7	1.02 1.01	1.02 1.01
2-2	1.28 1.25	1.25 1.23	5-8	1.02 1.01	1.02 1.00
2-3	1.26 1.23	1.24 1.22	5-9	1.02 1.01	1.01 1.00
2-4	1.25 1.22	1.23 1.21	5-10	1.02 1.01	1.01 1.00
2-5	1.24 1.21	1.22 1.20	5-11	1.02 1.01	1.01 1.00
2-6	1.24 1.21	1.21 1.19	6-0 to 6-2	1.01 1.01	1.01 1.00
2-7	1.24 1.21	1.20 1.17	6-3 to 6-5	1.00 1.00	1.01 1.00
2-8	1.23 1.20	1.19 1.16	6-6 to 6-8	1.00 1.00	1.00 1.00
2-9	1.23 1.20	1.18 1.15	6-9 to 6-11	1.00 1.00	1.00 1.00
2-10	1.22 1.19	1.18 1.15	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.21 1.18	1.17 1.15	7-3 to 7-5	1.00 1.00	1.00 1.00
3-0	1.20 1.17	1.17 1.14	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.18 1.16	1.16 1.13	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.17 1.14	1.15 1.12	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.16 1.13	1.14 1.11	8-3 to 8-5	1.00 1.01	1.00 1.01
3-4	1.14 1.12	1.13 1.11	8-6 to 8-8	1.00 1.01	1.00 1.01
3-5	1.14 1.11	1.13 1.10	8-9 to 8-11	1.01 1.02	1.00 1.01
3-6	1.13 1.11	1.12 1.10	9-0 to 9-2	1.01 1.02	1.01 1.02
3-7	1.13 1.11	1.12 1.09	9-3 to 9-5	1.01 1.02	1.01 1.02
3-8	1.13 1.11	1.11 1.09	9-6 to 9-8	1.02 1.03	1.01 1.02
3-9	1.13 1.11	1.10 1.08	9-9 to 9-11	1.02 1.04	1.02 1.03
3-10	1.12 1.10	1.10 1.08	10-0 to 10-2	1.03 1.04	1.02 1.03
3-11	1.12 1.09	1.09 1.07	10-3 to 10-5	1.03 1.05	1.02 1.03
4-0	1.11 1.08	1.08 1.06	10-6 to 10-8	1.04 1.05	1.03 1.04
4-1	1.09 1.07	1.07 1.05	10-9 to 10-11	1.04 1.05	1.03 1.04
4-2	1.08 1.06	1.06 1.04	11-0 to 11-2	1.05 1.06	1.04 1.05
4-3	1.07 1.05	1.06 1.04	11-3 to 11-5	1.05 1.06	1.04 1.06
4-4	1.06 1.05	1.05 1.03	11-6 to 11-8	1.05 1.07	1.05 1.06
4-5	1.06 1.04	1.05 1.03	11-9 to 11-11	1.06 1.07	1.05 1.07
4-6	1.06 1.04	1.05 1.03	12-0 to 12-2	1.06 1.08	1.06 1.08
4-7	1.06 1.04	1.04 1.02	12-3 to 12-5	1.06 1.08	1.06 1.08
4-8	1.06 1.04	1.04 1.02	12-6 to 12-8	1.07 1.09	1.07 1.09
4-9	1.06 1.04	1.03 1.02	12-9 to 12-11	1.07 1.09	1.08 1.09
4-10	1.06 1.04	1.03 1.01	13-0 to 13-2	1.08 1.10	1.08 1.09
4-11	1.06 1.04	1.03 1.01	13-3 to 13-5	1.09 1.10	1.09 1.10
5-0	1.06 1.04	1.03 1.01	13-6 to 13-8	1.10 1.11	1.10 1.11
5-1	1.05 1.04	1.03 1.01	13-9 to 13-11	1.11 1.12	1.11 1.12
5-2	1.04 1.03	1.03 1.01	14-0 and up	1.13 1.15	1.12 1.13

^{1/} These factors were based on 82,084 records of cows that calved from November through June and on 51,688 records of those that calved from July through October.

TABLE 17.--HOLSTEIN AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in California $\underline{1}/$

Age in				Age in years		Adjustment factors by season of calving				
years and	Novem	ber	July	to	and	1	Nove	mber	July	to
months	to Ju Milk	ne Fat	Octo Milk	ber Fat	_ mont	ths _	to J Milk	une Fat	Octo Milk	Fat
1-9 1-10 1-11	1.45 1.42	1.42 1.40 1.37	1.41 1.38 1.36	1.39 1.36 1.34	5-3 5-4 5-5		1.04 1.03 1.03	1.03 1.03 1.03	1.03 1.03 1.03	1.02 1.02 1.02
2-0	1.38	1.35	1.35	1.32	5-6		1.03	1.03	1.03	1.02
2-1	1.37	1.34	1.33	1.31	5-7		1.03	1.03	1.03	1.02
2-2	1.35	1.32	1.31	1.29	5-8		1.03	1.03	1.03	1.01
2-3 2-4 2-5	1.32	1.30 1.28 1.27	1.30 1.29 1.28	1.28 1.27 1.26	5-9 5-1 5-1	0	1.03 1.03 1.02	1.03 1.02 1.01	1.02 1.02 1.02	1.01 1.01 1.01
2-6	1.29	1.26	1.27	1.24	6-3	to 6-2	1.01	1.01	1.02	1.01
2-7	1.28	1.25	1.25	1.23		to 6-5	1.01	1.00	1.02	1.01
2-8	1.27	1.24	1.23	1.21		to 6-8	1.00	1.00	1.01	1.01
2-9	1.26	1.24	1.22	1.20	7-0	to 6-11	1.00	1.00	1.00	1.00
2-10	1.25	1.23	1.21	1.19		to 7-2	1.00	1.00	1.00	1.00
2-11	1.24	1.22	1.20	1.18		to 7-5	1.00	1.00	1.00	1.00
3-0 3-1 3-2	1.21	1.21 1.19 1.18	1.19 1.19 1.19	1.17 1.17 1.17	7-9	to 7-8 to 7-11 to 8-2	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
3-3	1.20	1.17	1.19	1.17	8-6	to 8-5	1.00	1.00	1.00	1.00
3-4	1.19	1.17	1.19	1.17		to 8-8	1.00	1.01	1.01	1.01
3-5	1.18	1.16	1.18	1.16		to 8-11	1.01	1.01	1.02	1.01
3-6	1.17	1.15	1.17	1.15	9-3	to 9-2	1.01	1.02	1.02	1.02
3-7	1.15	1.14	1.16	1.14		to 9-5	1.02	1.02	1.03	1.02
3-8	1.14	1.13	1.14	1.13		to 9-8	1.03	1.03	1.03	1.03
3-9	1.13	1.12	1.12	1.11	10-0	to 9-11	1.03	1.03	1.03	1.03
3-10	1.12	1.11	1.10	1.09		0 to 10-2	1.04	1.04	1.03	1.04
3-11	1.11	1.10	1.09	1.08		3 to 10-5	1.05	1.05	1.04	1.04
4-0	1.11	1.09	1.08	1.07	10-9	6 to 10-8	1.05	1.05	1.04	1.05
4-1	1.09	1.08	1.08	1.07		9 to 10-11	1.06	1.06	1.04	1.05
4-2	1.08	1.07	1.08	1.07		0 to 11-2	1.07	1.07	1.05	1.06
4-3	1.08	1.06	1.08	1.07	11-6	3 to 11-5	1.07	1.07	1.06	1.07
4-4	1.08	1.06	1.08	1.07		6 to 11-8	1.08	1.08	1.07	1.08
4-5	1.08	1.06	1.08	1.07		9 to 11-11	1.08	1.08	1.08	1.08
4-6	1.08	1.06	1.08	1.07	12-3	0 to 12-2	1.09	1.09	1.09	1.09
4-7	1.07	1.06	1.07	1.06		3 to 12-5	1.09	1.10	1.10	1.10
4-8	1.07	1.06	1.06	1.05		6 to 12-8	1.10	1.10	1.11	1.11
4-9	1.06	1.05	1.05	1.04	13-0	9 to 12-11	1.11	1.11	1.12	1.12
4-10	1.06	1.05	1.04	1.03		0 to 13-2	1.11	1.11	1.13	1.13
4-11	1.06	1.05	1.03	1.02		3 to 13-5	1.11	1.12	1.14	1.14
5-0	1.06	1.05	1.03	1.02	13-9	6 to 13-8	1.12	1.13	1.15	1.16
5-1	1.06	1.04	1.03	1.02		9 to 13-11	1.12	1.13	1.16	1.17
5-2	1.05	1.03	1.03	1.02		0 and up	1.12	1.13	1.17	1.18

^{1/} These factors were based on 16,429 records of cows that calved from November through June and on 9,146 records of those that calved from July through October.

TABLE 18.--JERSEY AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania $\underline{1}/$

Age in years	Adjustment season of		Age in years	Adjustment factors by season of calving			
and	November	July to	and	November	July to		
months	to June Milk Fat	October Milk Fat	months	to June Milk Fat	October Milk Fat		
				111111111111111111111111111111111111111	HILL TAL		
1-9	1.38 1.35	1.32 1.30	5-3	1.03 1.01	1.01 1.00		
1-10 1-11	1.33 1.29 1.30 1.27	1.28 1.25 1.26 1.23	5-4	1.02 1.00	1.01 1.00		
1-11	1.30 1.27	1.20 1.23	5-5	1.01 1.00	1.01 1.00		
2-0	1.30 1.26	1.24 1.21	5-6	1.01 1.00	1.01 1.00		
2 -1 2 - 2	1.29 1.26	1.23 1.20	5-7	1.01 1.00	1.01 1.00		
Z - Z	1.29 1.26	1.22 1.19	5-8	1.01 1.00	1.01 1.00		
2-3	1.29 1.26	1.22 1.19	5-9	1.01 1.00	1.00 1.00		
2-4	1.29 1.26	1.22 1.19	5-10	1.01 1.00	1.00 1.00		
2-5	1.28 1.25	1.22 1.19	5-11	1.01 1.00	1.00 1.00		
2-6	1.28 1.25	1.22 1.19	6-0 to 6-2	1.01 1.00	1.00 1.00		
2-7	1.27 1.24	1.21 1.19	6-3 to 6-5	1.00 1.00	1.00 1.00		
2-8	1.26 1.23	1.20 1.18	6 - 6 to 6-8	1.00 1.00	1.00 1.00		
2-9	1.24 1.21	1.19 1.16	6-9 to 6-11	1.00 1.00	1.00 1.00		
2-10	1.22 1.18	1.17 1.14	7-0 to 7-2	1.00 1.00	1.00 1.00		
2-11	1.19 1.15	1.15 1.12	7-3 to 7-5	1.00 1.00	1.00 1.00		
3-0	1.17 1.13	1.13 1.10	7 - 6 to 7-8	1.00 1.01	1.00 1.00		
3-1	1.16 1.12	1.12 1.09	7-9 to 7-11	1.00 1.01	1.00 1.00 1.00 1.00		
3-2	1.15 1.11	1.12 1.09	8-0 to 8-2	1.01 1.01	1.00 1.01		
3-3	1.14 1.11	1.12 1.09	8-3 to 8-5	1.01 1.01	1.00 1.01		
3-4	1.13 1.10	1.12 1.09	8-6 to 8-8	1.01 1.02	1.00 1.01 1.00 1.01		
3-5	1.13 1.10	1.12 1.09	8 - 9 to 8-11	1.01 1.03	1.01 1.02		
3-6	1.13 1.09	1.12 1.09	9-0 to 9-2	1.02 1.03	1.01 1.02		
3-7	1.12 1.09	1.11 1.08	9-3 to 9-5	1.02 1.03	1.01 1.02		
3-8	1.12 1.09	1.10 1.07	9-6 to 9-8	1.02 1.03	1.02 1.03		
3-9	1.11 1.08	1.09 1.06	9-9 to 9-11	1.02 1.03	1.02 1.03		
3-10	1.10 1.07	1.08 1.05	10-0 to 10-2	1.02 1.03	1.03 1.04		
3-11	1.09 1.06	1.06 1.04	10-3 to 10-5	1.02 1.04	1.03 1.04		
4-0	1.07 1.05	1.05 1.03	10-6 to 10-8	1.02 1.04	1.04 1.05		
4-1	1.06 1.04	1.04 1.02	10-9 to 10-11	1.02 1.04	1.04 1.05		
4-2	1.05 1.03	1.04 1.01	11 - 0 to 11 - 2	1.02 1.04	1.04 1.06		
4-3	1.05 1.03	1.04 1.01	11-3 to 11-5	1.02 1.04	1.04 1.06		
4-4	1.04 1.02	1.04 1.01	11-6 to 11-8	1.02 1.04	1.04 1.06		
4-5	1.04 1.02	1.04 1.01	11 - 9 to !1-11	1.02 1.05	1.04 1.06		
4-6	1.04 1.02	1.04 1.01	12-0 to 12-2	1.03 1.05	1.04 1.06		
4-7	1.04 1.02	1.03 1.01	12-3 to 12-5	1.03 1.06	1.04 1.06		
4-8	1.04 1.02	1.03 1.00	12-6 to 12-8	1.03 1.06	1.04 1.06		
4-9	1.04 1.02	1.03 1.00	12-9 to 12-11	1.03 1.07	1.04 1.06		
4-10	1.04 1.02	1.03 1.00	13-0 to 13-2	1.03 1.07	1.05 1.06		
4-11	1.04 1.02	1.02 1.00	13-3 to 13-5	1.03 1.07	1.05 1.06		
5-0	1.04 1.02	1.01 1.00	13-6 to 13-8	1.03 1.08	1.05 1.07		
5-1 5-2	1.04 1.02	1.01 1.00	13-9 to 13-11	1.03 1.08	1.05 1.07		
J=Z	1.04 1.01	1.01 1.00	14-0 and up	1.04 1.09	1.06 1.07		

^{1/2} These factors were based on 21,958 records of cows that calved from November through June and on 13,664 records of those that calved from July through October.

TABLE 19.--JERSEY AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas 1/

Age in	Adjustment f		Age in years	Adjustment season of	
years	November	July to	and	November	July to
months	to June Milk Fat	October Milk Fat	months	to June Milk Fat	October Milk Fat
1-9	1.34 1.31	1.26 1.24	5-3	1.02 1.00	1.02 1.01
1-10	1.32 1.29	1.24 1.22	5-4	1.02 1.00	1.02 1.01
1-11	1.29 1.27	1.23 1.21	5-5	1.02 1.00	1.02 1.01
2-0	1.28 1.25	1.22 1.20	5-6	1.02 1.00	1.02 1.01
2-1	1.27 1.24	1.21 1.19	5-7	1.02 1.00	1.02 1.01
2-2	1.26 1.23	1.21 1.18	5-8	1.02 1.00	1.02 1.01
2-3	1.26 1.23	1.21 1.18	5-9	1.02 1.00	1.02 1.01
2-4	1.26 1.23	1.21 1.18	5-10	1.01 1.00	1.02 1.01
2-5	1.26 1.23	1.20 1.17	5-11	1.01 1.00	1.01 1.00
2-6	1.25 1.23	1.19 1.16	6-0 to 6-2	1.00 1.00	1.01 1.00
2-7	1.25 1.22	1.18 1.15	6-3 to 6-5	1.00 1.00	1.01 1.00
2-8	1.23 1.20	1.16 1.14	6-6 to 6-8	1.00 1.00	1.01 1.00
2-9	1.21 1.17	1.14 1.12	6-9 to 6-11	1.00 1.00	1.00 1.00
2-10	1.18 1.15	1.13 1.10	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.16 1.13	1.13 1.09	7-3 to 7-5	1.00 1.01	1.00 1.00
3-0	1.15 1.12	1.13 1.09	7-6 to 7-8	1.00 1.01	1.00 1.00
3-1	1.14 1.11	1.12 1.09	7-9 to 7-11	1.00 1.01	1.00 1.00
3-2	1.14 1.10	1.11 1.08	8-0 to 8-2	1.00 1.01	1.00 1.01
3-3	1.14 1.10	1.11 1.08	8-3 to 8-5	1.00 1.01	1.01 1.02
3-4	1.13 1.10	1.11 1.08	8-6 to 8-8	1.00 1.01	1.01 1.02
3-5	1.13 1.10	1.11 1.08	8-9 to 8-11	1.01 1.02	1.01 1.02
3-6	1.13 1.10	1.11 1.08	9-0 to 9-2	1.01 1.02	1.01 1.02
3-7	1.13 1.10	1.11 1.08	9-3 to 9-5	1.01 1.03	1.01 1.02
3-8	1.13 1.10	1.11 1.08	9-6 to 9-8	1.01 1.03	1.01 1.03
3-9	1.12 1.09	1.10 1.07	9-9 to 9-11	1.01 1.03	1.01 1.03
3-10	1.11 1.08	1.08 1.05	10-0 to 10-2	1.01 1.03	1.01 1.03
3-11	1.09 1.06	1.06 1.03	10-3 to 10-5	1.02 1.03	1.02 1.03
4-0	1.07 1.04	1.05 1.02	10-6 to 10-8	1.02 1.03	1.02 1.03
4-1	1.06 1.03	1.05 1.02	10-9 to 10-11	1.02 1.03	1.02 1.03
4-2	1.05 1.03	1.05 1.02	11-0 to 11-2	1.03 1.04	1.02 1.03
4-3	1.04 1.03	1.05 1.02	11-3 to 11-5	1.03 1.04	1.02 1.04
4-4	1.04 1.03	1.05 1.02	11-6 to 11-8	1.03 1.04	1.02 1.04
4-5	1.04 1.03	1.05 1.01	11-9 to 11-11	1.04 1.05	1.03 1.04
4-6	1.04 1.03	1.04 1.01	12-0 to 12-2	1.04 1.05	1.03 1.05
4-7	1.04 1.03	1.04 1.01	12-3 to 12-5	1.05 1.05	1.04 1.05
4-8	1.04 1.03	1.03 1.01	12-6 to 12-8	1.05 1.06	1.04 1.06
4-9	1.04 1.03	1.03 1.01	12-9 to 12-11	1.06 1.06	1.05 1.06
4-10	1.04 1.03	1.02 1.01	13-0 to 13-2	1.06 1.07	1.05 1.07
4-11	1.04 1.02	1.02 1.01	13-3 to 13-5	1.06 1.07	1.05 1.07
5-0	1.03 1.02	1.02 1.01	13-6 to 13-8	1.07 1.08	1.06 1.08
5-1	1.02 1.01	1.02 1.01	13-9 to 13-11	1.07 1.08	1.06 1.08
5-2	1.02 1.01	1.02 1.01	14-0 and up	1.08 1.09	1.07 1.09

^{1/} These factors were based on 22,601 records of cows that calved from November through June and on 13,438 records of those that calved from July through October.

TABLE 20.--JERSEY AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas 1/

Age in years	Adjustment season of		Age in years	Adjustment season of	
and	November	July to	and	November	July to
months	to June	October	months	to June	October
	Milk Fat	Milk Fat	· · · · · · · · · · · · · · · · · · ·	Milk Fat	Milk Fat
1-9	1.34 1.30	1.25 1.21	5-3	1.01 1.00	1.01 1.00
1-10	1.31 1.28	1.23 1.19	5-4	1.01 1.00	1.01 1.00
1-11	1.29 1.26	1.22 1.19	5-5	1.01 1.00	1.01 1.00
2-0	1.28 1.24	1.22 1.19	5-6	1.01 1.00	1.01 1.00
2-1	1.26 1.23	1.22 1.19	5-7	1.01 1.00	1.01 1.00
2-2	1.25 1.22	1.22 1.19	5-8	1.01 1.00	1.00 1.00
2-3	1.23 1.20	1.22 1.19	5-9	1.01 1.00	1.00 1.00
2-4	1.22 1.19	1.21 1.19	5-10	1.01 1.00	1.00 1.00
2-5	1.21 1.18	1.20 1.18	5-11	1.01 1.00	1.00 1.00
2-6	1.21 1.18	1.19 1.17	6-0 to 6-2	1.00 1.00	1.00 1.00
2-7	1.21 1.18	1.18 1.16	6-3 to 6-5	1.00 1.00	1.00 1.00
2-8	1.21 1.18	1.17 1.15	6-6 to 6-8	1.00 1.00	1.00 1.00
2-9	1.20 1.17	1.16 1.14	6-9 to 6-11	1.00 1.00	1.00 1.00
2-10	1.18 1.15	1.15 1.13	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.17 1.13	1.14 1.12	7-3 to 7-5	1.00 1.01	1.00 1.01
3-0	1.15 1.12	1.14 1.11	7-6 to 7-8	1.01 1.01	1.00 1.01
3-1	1.14 1.11	1.14 1.11	7-9 to 7-11	1.01 1.02	1.00 1.01
3-2	1.13 1.10	1.14 1.11	8-0 to 8-2	1.01 1.02	1.00 1.01
3-3	1.11 1.09	1.14 1.11	8-3 to 8-5	1.01 1.02	1.01 1.02
3-4	1.10 1.08	1.13 1.10	8-6 to 8-8	1.01 1.02	1.01 1.02
3-5	1.09 1.07	1.13 1.10	8-9 to 8-11	1.01 1.02	1.01 1.02
3-6	1.09 1.07	1.13 1.10	9-0 to 9-2	1.01 1.02	1.01 1.02
3-7	1.09 1.07	1.12 1.10	9-3 to 9-5	1.01 1.02	1.02 1.03
3-8	1.09 1.07	1.11 1.09	9-6 to 9-8	1.01 1.02	1.02 1.03
3-9	1.09 1.07	1.09 1.07	9-9 to 9-11	1.01 1.03	1.03 1.04
3-10	1.09 1.06	1.07 1.05	10-0 to 10-2	1.02 1.03	1.03 1.04
3-11	1.08 1.05	1.06 1.03	10-3 to 10-5	1.02 1.04	1.04 1.05
4-0	1.07 1.04	1.05 1.02	10-6 to 10-8	1.03 1.04	1.04 1.05
4-1	1.06 1.03	1.05 1.02	10-9 to 10-11	1.03 1.04	1.05 1.06
4-2	1.05 1.02	1.05 1.02	11-0 to 11-2	1.04 1.05	1.06 1.07
4-3	1.04 1.02	1.04 1.02	11-3 to 11-5	1.04 1.05	1.06 1.08
4-4	1.03 1.02	1.04 1.02	11-6 to 11-8	1.05 1.06	1.07 1.09
4-5	1.03 1.02	1.04 1.02	11-9 to 11-11	1.06 1.06	1.08 1.10
4-6	1.03 1.02	1.04 1.02	12-0 to 12-2	1.07 1.07	1.09 1.11
4-7	1.03 1.02	1.04 1.02	12-3 to 12-5	1.08 1.08	1.10 1.12
4-8	1.03 1.02	1.03 1.01	12-6 to 12-8	1.09 1.09	1.11 1.13
4-9	1.03 1.02	1.02 1.01	12-9 to 12-11	1.10 1.10	1.12 1.14
4-10	1.03 1.02	1.01 1.00	13-0 to 13-2	1.11 1.10	1.13 1.15
4-11	1.03 1.02	1.01 1.00	13-3 to 13-5	1.12 1.11	1.14 1.16
5-0	1.03 1.01	1.01 1.00	13-6 to 13-8	1.13 1.12	1.15 1.17
5-1	1.02 1.01	1.01 1.00	13-9 to 13-11	1.14 1.13	1.16 1.18
5-2	1.02 1.00	1.01 1.00	14-0 and up	1.16 1.15	1.17 1.20

^{1/} These factors were based on 42,242 records of cows that calved from November through June and on 29,619 records of those that calved from July through October.

TABLE 21.--JERSEY AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calve in Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii 1/

Age in years	Adjustment season of	calving	Age in years	Adjustment season of	calving
and	November	July to	and	November	July to
months	to June	October	months	to June	October
	Milk Fat	Milk Fat		Milk Fat	Milk Fat
1-9	1.34 1.31	1.28 1.26	5-3	1.03 1.01	1.04 1.02
1-10	1.31 1.28	1.25 1.24	5-4	1.03 1.01	1.03 1.01
1-11	1.30 1.27	1.24 1.23	5-5	1.03 1.01	1.03 1.01
2-0	1.29 1.26	1.23 1.22	5-6	1.03 1.01	1.03 1.01
2-1	1.28 1.25	1.23 1.22	5-7	1.02 1.01	1.03 1.01
2-2	1.27 1.25	1.22 1.21	5-8	1.02 1.01	1.03 1.01
2-3	1.26 1.24	1.22 1.21	5-9	1.02 1.01	1.03 1.01
2-4	1.25 1.23	1.22 1.20	5-10	1.02 1.00	1.03 1.01
2-5	1.23 1.21	1.21 1.19	5-11	1.02 1.00	1.03 1.01
2-6	1.23 1.21	1.20 1.19	6-0 to 6-2	1.02 1.00	1.03 1.01
2-7	1.22 1.20	1.20 1.18	6-3 to 6-5	1.02 1.00	1.03 1.01
2-8	1.21 1.19	1.19 1.17	6-6 to 6-8	1.02 1.00	1.02 1.01
2-9	1.20 1.17	1.19 1.16	6-9 to 6-11	1.02 1.00	1.02 1.00
2-10	1.19 1.15	1.18 1.14	7-0 to 7-2	1.01 1.00	1.01 1.00
2-11	1.17 1.13	1.17 1.13	7-3 to 7-5	1.01 1.00	1.01 1.00
3-0	1.16 1.12	1.15 1.12	7-6 to 7-8	1.01 1.00	1.01 1.00
3-1	1.16 1.12	1.14 1.11	7-9 to 7-11	1.01 1.00	1.01 1.00
3-2	1.15 1.11	1.13 1.10	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.14 1.11	1.13 1.09	8-3 to 8-5	1.00 1.00	1.00 1.00
3-4	1.13 1.10	1.13 1.09	8-6 to 8-8	1.00 1.00	1.00 1.00
3-5	1.13 1.10	1.12 1.08	8-9 to 8-11	1.00 1.00	1.00 1.00
3-6	1.12 1.09	1.12 1.08	9-0 to 9-2	1.00 1.00	1.00 1.01
3-7	1.12 1.09	1.12 1.08	9-3 to 9-5	1.00 1.00	1.00 1.01
3-8	1.11 1.09	1.11 1.08	9-6 to 9-8	1.00 1.01	1.01 1.01
3-9	1.11 1.08	1.10 1.07	9-9 to 9-11	1.01 1.02	1.01 1.02
3-10	1.10 1.06	1.09 1.06	10-0 to 10-2	1.01 1.02	1.01 1.02
3-11	1.09 1.05	1.08 1.05	10-3 to 10-5	1.01 1.02	1.02 1.02
4-0	1.08 1.04	1.08 1.04	10-6 to 10-8	1.01 1.02	1.02 1.03
4-1	1.07 1.04	1.07 1.04	10-9 to 10-11	1.01 1.02	1.02 1.03
4-2	1.07 1.03	1.06 1.03	11-0 to 11-2	1.01 1.02	1.02 1.03
4-3	1.06 1.03	1.06 1.03	11-3 to 11-5	1.01 1.03	1.02 1.04
4-4	1.05 1.03	1.06 1.03	11-6 to 11-8	1.02 1.03	1.02 1.04
4-5	1.05 1.03	1.05 1.02	11-9 to 11-11	1.02 1.04	1.02 1.04
4-6	1.05 1.03	1.05 1.02	12-0 to 12-2	1.02 1.04	1.03 1.04
4-7	1.05 1.03	1.05 1.02	12-3 to 12-5	1.03 1.05	1.03 1.05
4-8	1.05 1.03	1.05 1.02	12-6 to 12-8	1.03 1.05	1.03 1.05
4-9	1.05 1.02	1.05 1.02	12-9 to 12-11	1.04 1.06	1.03 1.05
4-10	1.05 1.02	1.05 1.02	13-0 to 13-2	1.04 1.06	1.03 1.05
4-11	1.04 1.01	1.05 1.02	13-3 to 13-5	1.04 1.06	1.03 1.06
5-0	1.04 1.01	1.05 1.02	13-6 to 13-8	1.05 1.07	1.03 1.06
5-1	1.03 1.01	1.05 1.02	13-9 to 13-11	1.05 1.07	1.03 1.06
5-2	1.03 1.01	1.04 1.02	14-0 and up	1.06 1.08	1.04 1.07

^{1/} These factors were based on 60,217 records of cows that calved from November through June and on 31,260 records of those that calved from July through October.

TABLE 22.--BROWN SWISS AND RED DANE AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calved in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Idaho, Wyoming, Montana, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Alaska, and Hawaii 1/

Age in years		istment eason of			Age in years		Adjustment factors by season of calving			
and months	Nove	ember June	July Octo	to	and months		ember	July Octo	to	
	Milk	Fat	Milk	Fat		Milk	Fat	Mi1k		
1-9	1.65	1.60	1.57	1.54	5-3	1.07	1.04	1.06	1.04	
1-10	1.58	1.53	1.51	1.48	5-4	1.06	1.04	1.06	1.04	
1-11	1.53	1.48	1.48	1.44	5-5	1.05	1.03	1.06	1.04	
2-0	1.49	1.44	1.45	1.41	5-6	1.04	1.03	1.06	1.04	
2-1	1.47	1.42	1.44	1.40	5-7	1.04	1.02	1.06	1.04	
2-2	1.45	1.40	1.43	1.39	5-8	1.03	1.02	1.05	1.04	
2-3	1.43	1.39	1.41	1.38	5-9	1.03	1.02	1.05	1.04	
2-4	1.42	1.37	1.41	1.37	5-10	1.02	1.01	1.05	1.04	
2-5	1.41	1.37	1.40	1.36	5-11	1.02	1.01	1.04	1.03	
2-6	1.40	1.36	1.40	1.36	6-0 to 6-2	1.02	1.01	1.04	1.02	
2-7	1.40	1.36	1.39	1.35	6-3 to 6-5	1.01	1.01	1.03	1.02	
2-8	1.39	1.36	1.37	1.34	6-6 to 6-8	1.00	1.00	1.02	1.01	
2-9	1.38	1.35	1.35	1.32	6-9 to 6-11	1.00	1.00	1.01	1.00	
2-10	1.36	1.32	1.33	1.30	7-0 to 7-2	1.00	1.00	1.00	1.00	
2-11	1.33	1.29	1.31	1.28	7-3 to 7-5	1.00	1.00	1.00	1.00	
3-0	1.30	1.26	1.28	1.25	7-6 to 7-8	1.00	1.00	1.00	1.00	
3-1	1.29	1.25	1.25	1.22	7-9 to 7-11	1.00	1.00	1.00	1.00	
3-2	1.27	1.23	1.23	1.20	8-0 to 8-2	1.00	1.00	1.00	1.00	
3-3	1.24	1.20	1.22	1.19	8-3 to 8-5	1.00	1.00	1.00	1.00	
3-4	1.22	1.18	1.21	1.18	8-6 to 8-8	1.00	1.00	1.00	1.01	
3-5	1.20	1.17	1.20	1.17	8-9 to 8-11	1.00	1.00	1.01	1.02	
3-6	1.19	1.16	1.19	1.16	9-0 to 9-2	1.00	1.00	1.01	1.02	
3-7	1.18	1.15	1.18	1.15	9-3 to 9-5	1.00	1.00	1.02	1.03	
3-8	1.18	1.15	1.17	1.14	9-6 to 9-8	1.00	1.01	1.02	1.03	
3-9	1.18	1.15	1.16	1.14	9-9 to 9-11	1.00	1.02	1.02	1.03	
3-10	1.18	1.15	1.15	1.13	10-0 to 10-2	1.01	1.02	1.02	1.03	
3-11	1.17	1.14	1.14	1.12	10-3 to 10-5	1.01	1.03	1.02	1.04	
4-0	1.16	1.14	1.13	1.11	10-6 to 10-8	1.02	1.03	1.02	1.04	
4-1	1.15	1.12	1.13	1.10	10-9 to 10-11	1.02	1.04	1.02	1.04	
4-2	1.14	1.11	1.12	1.09	11-0 to 11-2	1.03	1.05	1.03	1.04	
4-3	1.12	1.10	1.12	1.09	11-3 to 11-5	1.03	1.05	1.03	1.04	
4-4	1.11	1.09	1.12	1.09	11-6 to 11-8	1.04	1.06	1.03	1.05	
4-5	1.10	1.08	1.11	1.08	11-9 to 11-11	1.04	1.06	1.03	1.05	
4-6	1.09	1.07	1.10	1.07	12-0 to 12-2	1.05	1.07	1.04	1.06	
4-7	1.08	1.06	1.09	1.07	12-3 to 12-5	1.05	1.07	1.04	1.06	
4-8	1.07	1.05	1.09	1.07	12-6 to 12-8	1.06	1.08	1.05	1.07	
4-9	1.07	1.05	1.09	1.07	12-9 to 12-11	1.07	1.09	1.06	1.08	
4-10	1.07	1.05	1.08	1.07	13-0 to 13-2	1.07	1.10	1.06	1.09	
4-11	1.07	1.05	1.08	1.07	13-3 to 13-5	1.08	1.11	1.07	1.10	
5-0	1.07	1.05	1.08	1.06	13-6 to 13-8	1.09	1.13	1.08	1.11	
5-1	1.07	1.05	1.08	1.06	13-9 to 13-11	1.10	1.14	1.08	1.11	
5-2	1.07	1.05	1.07	1.05	14-0 and up	1.12	1.16	1.08	1.12	

^{1/2} These factors were based on 27,199 records of cows that calved from November through June and on 16,250 records of those that calved from July through October.

TABLE 23.--BROWN SWISS AND RED DANE AGE ADJUSTMENT FACTORS for milk and fat production: for cows that calved in Indiana, Illinois, Ohio, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas 1/

Age in years	Adjustment season of		Age in years	Adjustment season of	
and	November	July to	and	November	July to
	to June	October	months	to June	October
months	Milk Fat	Milk Fat		Milk Fat	Milk Fat
1-9	1.59 1.52	1.54 1.50	5-3	1.04 1.03	1.05 1.03
1-10	1.53 1.47	1.48 1.44	5-4	1.04 1.02	1.05 1.03
1-11	1.48 1.43	1.43 1.39	5-5	1.04 1.02	1.04 1.03
2-0	1.43 1.39	1.40 1.36	5-6	1.03 1.01	1.04 1.03
2-1	1.40 1.36	1.37 1.33	5-7	1.02 1.01	1.04 1.03
2-2	1.38 1.33	1.35 1.31	5-8	1.02 1.01	1.04 1.03
2-3	1.36 1.31	1.34 1.30	5-9	1.02 1.01	1.04 1.03
2-4	1.34 1.29	1.33 1.29	5-10	1.02 1.01	1.03 1.02
2-5	1.33 1.28	1.32 1.28	5-11	1.02 1.00	1.03 1.01
2-6	1.31 1.27	1.31 1.27	6-0 to 6-2	1.02 1.00	1.02 1.01
2-7	1.30 1.26	1.30 1.26	6-3 to 6-5	1.01 1.00	1.02 1.01
2-8	1.30 1.25	1.29 1.25	6-6 to 6-8	1.01 1.00	1.01 1.01
2-9	1.30 1.25	1.28 1.25	6-9 to 6-11	1.00 1.00	1.01 1.01
2-10	1.30 1.25	1.27 1.24	7-0 to 7-2	1.00 1.00	1.01 1.00
2-11	1.28 1.24	1.26 1.23	7-3 to 7-5	1.00 1.00	1.01 1.00
3-0	1.26 1.23	1.25 1.21	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.24 1.20	1.23 1.20	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.21 1.18	1.22 1.18	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.19 1.16	1.21 1.17	8-3 to 8-5	1.00 1.01	1.00 1.00
3-4	1.17 1.14	1.20 1.16	8-6 to 8-8	1.00 1.01	1.00 1.00
3-5	1.16 1.13	1.19 1.16	8-9 to 8-11	1.00 1.01	1.00 1.01
3-6	1.15 1.12	1.18 1.15	9-0 to 9-2	1.00 1.01	1.00 1.01
3-7	1.14 1.11	1.16 1.13	9-3 to 9-5	1.00 1.01	1.00 1.02
3-8	1.14 1.11	1.15 1.12	9-6 to 9-8	1.00 1.01	1.01 1.02
3-9	1.13 1.10	1.14 1.11	9-9 to 9-11	1.01 1.02	1.01 1.03
3-10	1.13 1.10	1.13 1.10	10-0 to 10-2	1.01 1.02	1.02 1.03
3-11	1.12 1.10	1.12 1.09	10-3 to 10-5	1.01 1.02	1.02 1.04
4-0	1.12 1.10	1.11 1.09	10-6 to 10-8	1.01 1.03	1.02 1.04
4-1	1.12 1.10	1.10 1.08	10-9 to 10-11	1.01 1.03	1.02 1.04
4-2	1.11 1.09	1.09 1.07	11-0 to 11-2	1.02 1.03	1.03 1.05
4-3	1.10 1.08	1.09 1.06	11-3 to 11-5	1.02 1.03	1.03 1.05
4-4	1.09 1.06	1.08 1.06	11-6 to 11-8	1.02 1.03	1.03 1.05
4-5	1.08 1.05	1.08 1.06	11-9 to 11-11	1.02 1.04	1.03 1.05
4-6	1.07 1.04	1.08 1.05	12-0 to 12-2	1.02 1.04	1.04 1.06
4-7	1.06 1.03	1.07 1.05	12-3 to 12-5	1.03 1.04	1.04 1.06
4-8	1.06 1.03	1.07 1.04	12-6 to 12-8	1.03 1.04	1.04 1.06
4-9	1.06 1.03	1.06 1.04	12-9 to 12-11	1.03 1.05	1.04 1.06
4-10	1.06 1.03	1.06 1.04	13-0 to 13-2	1.03 1.05	1.04 1.07
4-11	1.06 1.03	1.06 1.04	13-3 to 13-5	1.04 1.05	1.05 1.07
5-0	1.05 1.03	1.06 1.04	13-6 to 13-8	1.04 1.06	1.05 1.08
5-1	1.05 1.03	1.05 1.03	13-9 to 13-11	1.05 1.06	1.06 1.09
5-2	1.05 1.03	1.05 1.03	14-0 and up	1.06 1.07	1.07 1.11

^{1/2} These factors were based on 73,199 records of cows that calved from November through June and on 43,671 records of those that calved from July through October.

TABLE 24.--BROWN SWISS AND RED DANE AGE ADJUSTMENT FACTORS for milk and fat production: for Delaware, Maryland, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas 1/

Age in years	Adjustment season of		Age in years	Adjustment season of	
and	November	July to	and	November	July to
months	to June	October	months	to June	October
1-9 1-10 1-11	Milk Fat 1.64 1.61 1.59 1.55 1.53 1.49	1.42 1.35 1.41 1.34 1.40 1.33	5-3 5-4 5-5	Milk Fat 1.04 1.03 1.04 1.03 1.04 1.03	Milk Fat 1.05 1.04 1.05 1.04 1.05 1.04
2-0	1.47 1.43	1.40 1.32	5-6	1.03 1.03	1.05 1.04
2-1	1.42 1.38	1.39 1.32	5-7	1.03 1.02	1.05 1.04
2-2	1.38 1.34	1.39 1.32	5-8	1.03 1.02	1.05 1.04
2-3	1.35 1.31	1.38 1.32	5-9	1.03 1.02	1.04 1.03
2-4	1.33 1.29	1.38 1.32	5-10	1.03 1.02	1.03 1.03
2-5	1.33 1.29	1.36 1.31	5-11	1.02 1.02	1.03 1.03
2-6	1.33 1.29	1.33 1.29	6-0 to 6-2	1.01 1.01	1.02 1.02
2-7	1.33 1.29	1.30 1.26	6-3 to 6-5	1.01 1.01	1.01 1.01
2-8	1.33 1.29	1.27 1.23	6-6 to 6-8	1.00 1.00	1.00 1.00
2-9	1.32 1.29	1.24 1.20	6-9 to 6-11	1.00 1.00	1.00 1.00
2-10	1.31 1.27	1.23 1.19	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.28 1.25	1.23 1.19	7-3 to 7-5	1.00 1.00	1.00 1.00
3-0	1.26 1.23	1.22 1.19	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.25 1.22	1.22 1.19	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.24 1.21	1.21 1.18	8-0 to 8-2	1.00 1.00	1.00 1.00
3 - 3	1.23 1.20	1.21 1.17	8-3 to 8-5	1.00 1.00	1.01 1.00
3 - 4	1.21 1.18	1.19 1.15	8-6 to 8-8	1.00 1.00	1.01 1.00
3 - 5	1.19 1.16	1.17 1.13	8-9 to 8-11	1.00 1.01	1.01 1.01
3-6	1.17 1.14	1.15 1.11	9-0 to 9-2	1.01 1.01	1.01 1.01
3-7	1.17 1.14	1.13 1.09	9-3 to 9-5	1.01 1.01	1.01 1.01
3-8	1.17 1.14	1.13 1.09	9-6 to 9-8	1.01 1.02	1.02 1.02
3-9	1.17 1.14	1.13 1.09	9-9 to 9-11	1.02 1.02	1.02 1.02
3-10	1.15 1.13	1.12 1.09	10-0 to 10-2	1.02 1.03	1.02 1.03
3-11	1.13 1.11	1.11 1.09	10-3 to 10-5	1.02 1.03	1.03 1.03
4-0	1.12 1.11	1.11 1.08	10-6 to 10-8	1.03 1.04	1.03 1.04
4-1	1.12 1.11	1.11 1.08	10-9 to 10-11	1.03 1.04	1.03 1.04
4-2	1.12 1.11	1.11 1.08	11-0 to 11-2	1.04 1.05	1.03 1.05
4-3	1.12 1.11	1.11 1.08	11-3 to 11-5	1.04 1.05	1.03 1.05
4-4	1.12 1.10	1.11 1.08	11-6 to 11-8	1.04 1.05	1.03 1.05
4-5	1.10 1.09	1.11 1.08	11-9 to 11-11	1.04 1.05	1.03 1.05
4-6	1.08 1.07	1.10 1.08	12-0 to 12-2	1.04 1.05	1.04 1.06
4-7	1.06 1.05	1.10 1.08	12-3 to 12-5	1.05 1.06	1.04 1.06
4-8	1.05 1.04	1.09 1.07	12-6 to 12-8	1.05 1.06	1.04 1.06
4-9	1.05 1.04	1.08 1.05	12-9 to 12-11	1.06 1.07	1.04 1.06
4-10	1.05 1.04	1.06 1.04	13-0 to 13-2	1.06 1.08	1.04 1.06
4-11	1.05 1.04	1.06 1.04	13-3 to 13-5	1.07 1.09	1.04 1.06
5-0	1.04 1.03	1.05 1.04	13-6 to 13-8	1.08 1.11	1.04 1.06
5-1	1.04 1.03	1.05 1.04	13-9 to 13-11	1.09 1.12	1.04 1.06
5-2	1.04 1.03	1.05 1.04	14-0 and up	1.11 1.14	1.04 1.06

 $[\]underline{1}/$ These factors were based on 6,799 records of cows that calved from November through June and on 5,129 records of those that calved from July through October.

TABLE 25.--MILKING SHORTHORN AND RED POLL AGE ADJUSTMENT FACTORS for milk and fat production of cows in all States

Age in	Adjustment factors by season of calving		Age in years	Adjustment factors by season of calving	
years and	November	July to	and	November	July to
months	to June Milk Fat	October Milk Fat	months	to June Milk Fat	October Milk Fat
1-9	1.54 1.52	1.48 1.44	5-3	1.10 1.08	1.08 1.06
1-10	1.51 1.48	1.41 1.38	5-4	1.09 1.07	1.07 1.05
1-11	1.47 1.43	1.37 1.34	5-5	1.08 1.07	1.07 1.05
2-0	1.44 1.40	1.34 1.31	5-6	1.08 1.07	1.07 1.05
2-1	1.41 1.37	1.32 1.29	5-7	1.08 1.07	1.06 1.05
2-2	1.38 1.34	1.31 1.28	5-8	1.08 1.07	1.05 1.04
2-3	1.36 1.32	1.30 1.27	5-9	1.08 1.07	1.05 1.04
2-4	1.33 1.30	1.29 1.26	5-10	1.07 1.06	1.05 1.04
2-5	1.32 1.28	1.28 1.25	5-11	1.07 1.06	1.05 1.04
2-6	1.31 1.27	1.27 1.24	6-0 to 6-2	1.06 1.05	1.05 1.04
2-7	1.31 1.27	1.26 1.23	6-3 to 6-5	1.05 1.04	1.04 1.03
2-8	1.31 1.27	1.25 1.22	6-6 to 6-8	1.05 1.04	1.03 1.03
2-9	1.30 1.26	1.24 1.21	6-9 to 6-11	1.04 1.04	1.02 1.02
2-10	1.29 1.25	1.24 1.20	7-0 to 7-2	1.04 1.03	1.01 1.01
2-11	1.28 1.25	1.24 1.20	7-3 to 7-5	1.03 1.03	1.00 1.01
3-0	1.28 1.25	1.24 1.20	7-6 to 7-8	1.02 1.02	1.00 1.00
3-1	1.27 1.24	1.24 1.20	7-9 to 7-11	1.01 1.01	1.00 1.00
3-2	1.26 1.23	1.24 1.20	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.25 1.22	1.24 1.20	8-3 to 8-5	1.00 1.00	1.00 1.00
3-4	1.24 1.21	1.23 1.20	8-6 to 8-8	1.00 1.00	1.00 1.00
3-5	1.23 1.20	1.22 1.19	8-9 to 8-11	1.00 1.00	1.00 1.00
3-6	1.22 1.19	1.21 1.18	9-0 to 9-2	1.00 1.00	1.00 1.00
3-7	1.21 1.18	1.19 1.17	9-3 to 9-5	1.00 1.00	1.00 1.00
3-8	1.20 1.18	1.18 1.16	9-6 to 9-8	1.00 1.00	1.00 1.00
3-9	1.20 1.17	1.17 1.15	9-9 to 9-11	1.00 1.01	1.00 1.00
3-10	1.20 1.17	1.16 1.14	10-0 to 10-2	1.01 1.01	1.00 1.00
3-11	1.19 1.16	1.15 1.14	10-3 to 10-5	1.01 1.01	1.00 1.00
4-0	1.18 1.15	1.15 1.14	10-6 to 10-8	1.01 1.02	1.00 1.00
4-1	1.17 1.14	1.15 1.13	10-9 to 10-11	1.01 1.02	1.00 1.00
4-2	1.16 1.14	1.14 1.12	11-0 to 11-2	1.01 1.02	1.00 1.01
4-3	1.15 1.13	1.13 1.11	11-3 to 11-5	1.01 1.02	1.01 1.01
4-4	1.14 1.12	1.12 1.10	11-6 to 11-8	1.01 1.02	1.01 1.01
4-5	1.14 1.12	1.11 1.09	11-9 to 11-11	1.01 1.02	1.01 1.01
4-6	1.13 1.11	1.11 1.09	12-0 to 12-2	1.01 1.03	1.01 1.01
4-7	1.13 1.11	1.10 1.08	12-3 to 12-5	1.02 1.03	1.01 1.01
4-8	1.13 1.11	1.09 1.08	12-6 to 12-8	1.02 1.03	1.01 1.01
4-9	1.13 1.11	1.08 1.07	12-9 to 12-11	1.02 1.03	1.01 1.02
4-10	1.12 1.11	1.08 1.07	13-0 to 13-2	1.02 1.03	1.01 1.02
4-11	1.12 1.11	1.08 1.07	13-3 to 13-5	1.02 1.04	1.01 1.02
5-0	1.12 1.11	1.08 1.07	13-6 to 13-8	1.02 1.04	1.01 1.03
5-1	1.12 1.10	1.08 1.07	13-9 to 13-11	1.02 1.04	1.01 1.03
5-2	1.11 1.09	1.08 1.06	14-0 and up	1.03 1.05	1.02 1.04

TABLE 26.--MIXED BREED AGE ADJUSTMENT FACTORS for milk and fat production of cows in all States $\frac{1}{2}$

Age in years	Adjustment factors by season of calving		Age in years	Adjustment factors by season of calving	
and months	November	July to	and months	November	July to
MOTICITS	to June Milk Fat	October Milk Fat	monens	to June Milk Fat	October Milk Fat
1-9	1.43 1.39	1.36 1.33	5-3	1.04 1.02	1.03 1.01
1-10	1.38 1.34	1.31 1.28	5-4	1.03 1.02	1.03 1.01
1-11	1.35 1.30	1.28 1.25	5-5	1.03 1.02	1.03 1.01
2-0	1.32 1.28	1.27 1.24	5-6	1.02 1.01	1.03 1.01
2-1	1.30 1.27	1.26 1.22	5-7	1.02 1.01	1.03 1.01
2-2	1.29 1.25	1.25 1.22	5-8	1.02 1.01	1.02 1.01
2-3	1.28 1.24	1.24 1.21	5-9	1.02 1.01	1.02 1.01
2-4	1.27 1.23	1.23 1.20	5-10	1.02 1.01	1.02 1.01
2-5	1.25 1.22	1.23 1.20	5-11	1.02 1.01	1.02 1.00
2-6	1.25 1.22	1.22 1.19	6-0 to 6-2	1.01 1.00	1.01 1.00
2-7	1.25 1.21	1.21 1.18	6-3 to 6-5	1.01 1.00	1.01 1.00
2-8	1.24 1.20	1.20 1.17	6-6 to 6-8	1.01 1.00	1.01 1.00
2-9	1.24 1.20	1.19 1.16	6-9 to 6-11	1.01 1.00	1.01 1.00
2-10	1.23 1.19	1.18 1.15	7-0 to 7-2	1.00 1.00	1.00 1.00
2-11	1.21 1.18	1.18 1.14	7-3 to 7-5	1.00 1.00	1.00 1.00
3-0	1.20 1.16	1.17 1.13	7-6 to 7-8	1.00 1.00	1.00 1.00
3-1	1.19 1.15	1.16 1.13	7-9 to 7-11	1.00 1.00	1.00 1.00
3-2	1.17 1.14	1.15 1.12	8-0 to 8-2	1.00 1.00	1.00 1.00
3-3	1.16 1.13	1.15 1.11	8-3 to 8-5	1.00 1.00	1.00 1.01
3-4	1.15 1.12	1.14 1.11	8-6 to 8-8	1.00 1.01	1.00 1.01
3-5	1.14 1.11	1.14 1.11	8-9 to 8-11	1.00 1.01	1.01 1.01
3-6	1.13 1.10	1.14 1.10	9-0 to 9-2	1.00 1.01	1.01 1.01
3-7	1.13 1.10	1.13 1.09	9-3 to 9-5	1.00 1.01	1.01 1.02
3-8	1.13 1.10	1.12 1.09	9-6 to 9-8	1.01 1.02	1.01 1.02
3-9	1.12 1.10	1.11 1.08	9-9 to 9-11	1.01 1.02	1.02 1.03
3-10	1.12 1.09	1.10 1.07	10-0 to 10-2	1.01 1.03	1.02 1.03
3-11	1.11 1.08	1.09 1.07	10-3 to 10-5	1.02 1.03	1.02 1.03
4-0	1.10 1.07	1.08 1.06	10-6 to 10-8	1.02 1.03	1.02 1.04
4-1	1.09 1.06	1.08 1.05	10-9 to 10-11	1.02 1.04	1.02 1.04
4-2	1.08 1.06	1.07 1.04	11-0 to 11-2	1.02 1.04	1.03 1.04
4-3	1.08 1.05	1.07 1.04	11-3 to 11-5	1.03 1.04	1.03 1.04
4-4	1.06 1.04	1.06 1.04	11-6 to 11-8	1.03 1.04	1.03 1.04
4-5	1.06 1.04	1.06 1.03	11-9 to 11-11	1.03 1.05	1.03 1.05
4-6	1.05 1.04	1.06 1.03	12-0 to 12-2	1.04 1.05	1.03 1.05
4-7	1.05 1.03	1.05 1.03	12-3 to 12-5	1.04 1.06	1.04 1.05
4-8	1.05 1.03	1.05 1.03	12-6 to 12-8	1.04 1.06	1.04 1.06
4-9	1.05 1.03	1.04 1.02	12-9 to 12-11	1.05 1.07	1.04 1.06
4-10	1.05 1.03	1.04 1.02	13-0 to 13-2	1.05 1.07	1.05 1.07
4-11	1.05 1.03	1.04 1.02	13-3 to 13-5	1.06 1.08	1.05 1.07
5-0	1.04 1.03	1.03 1.02	13-6 to 13-8	1.06 1.08	1.06 1.08
5-1	1.04 1.02	1.03 1.01	13-9 to 13-11	1.07 1.09	1.06 1.09
5-2	1.04 1.02	1.03 1.01	14-0 and up	1.08 1.10	1.07 1.10

 $[\]underline{1}/$ Computed by averaging the factors for all breeds.